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ROAD DIVISION LOGISTICS MANAGEMENT TRAINING - -

IS IT ADEQUATE?

An abstract for a thesis presented to the Faculty of
the U. S. Army Command and General Staff College in
partial fulfillment of the requirements of the
degree

MASTER OF MILITARY ART AND SCIENCE

by
TOM H. BRAIN, LTC, ORDNANCE

Fort Leavenworth, Kansas
1967


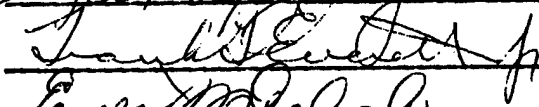
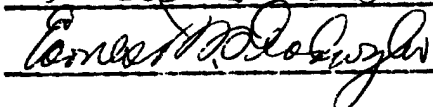
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IS IT ADEQUATE?

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26 April 1967

The opinions and conclusions expressed herein are those of the individual student author and do not necessarily represent the views of either the U. S. Army Command and General Staff College or any other governmental agency.

ABSTRACT

During the period from 1962 to 1964, the United States Army reorganized its combat divisions under the ROAD concept. The ROAD concept is one of a fixed base composed of control and combat support units to which are attached varying numbers of maneuver and combat service support units. In this way, the ROAD infantry, mechanized, and armored divisions are formed. Along with this flexible organization is the concept of functionalized combat service support. This thesis investigates the adequacy of the U. S. Army system of officer education to provide trained key logisticians for the ROAD division.

The problem is approached in three phases. Phase 1 examines the ROAD organizational structure, identifies the key ROAD logisticians, and determines the degree of technical expertise which is available at each staff echelon within the division. In Phase 2 the scope of logistic knowledge which the key ROAD logistician requires is determined in seven functional areas of logistics. In Phase 3 the logistic training as presented at the branch schools and the U. S. Army Command and General Staff College is studied.

In chapter II the key ROAD logisticians are identified as the assistant division commander for support, the support command commander, and the G4. The role of specialists within support command is discussed. The specialists are the medical, supply and transport, and maintenance battalion commanders. Other key officers are the engineer, aviation, and signal battalion commanders; however, these specialists have assistants stationed at division headquarters to provide technical advice and assistance to the staff and commander.

Seven functional areas of logistics are identified in chapter III. Those areas are labor, construction, ammunition, transportation, medical evacuation and hospitalization, supply, and maintenance. In each of these areas, the knowledge requirement of the key ROAD logistician is estimated with due respect to the expertise available at each staff level.

In chapter IV the logistic management training available within the U. S. Army officer educational system is considered. The logistic direction and content of the branch courses, career courses, and the Command and General Staff College are evaluated. The logistics

officer specialist program and various refresher or orientation courses are also evaluated for their impact on the training of a key ROAD logistician.

Chapter V contains the analysis and conclusions of the thesis. It is determined that in the supply and ammunition functional areas, logistic management training is inadequate. In the medical and construction fields, the logistic management training is adequate. If all officers attend the Senior Officers Preventive Maintenance Course at Fort Knox prior to becoming key ROAD logisticians, the training in the maintenance field would be adequate. However, if only the officer training through C&GSC level is considered, the logistic management training in the maintenance area is inadequate.

Although recommendations to resolve the problem which was investigated are beyond the stated purpose of the thesis, the author includes a chapter of recommended steps to improve the adequacy of logistics management training. There are two series of recommendations presented.

The first sequence includes seven specific steps which could improve the training adequacy and which are supported by facts as presented in the initial chapters of the thesis. These steps include deepening the logistic coverage at C&GSC, augmenting the staff of the division G4 with two technical service field grade officers, initiating a four-week course at Fort Lee, Virginia, in ROAD division logistic instruction, augmenting the division support command staff with technical service officers, directing the assignment of career logisticians as DISCOM commanders, and increasing the logistics coverage at branch career courses to 10 percent of the total course.

Because the thesis research developed concepts which were pertinent to the subject but were of a larger scope than that of ROAD division logistics training, the author included additional recommendations which are suggested as starting points for further research in this subject. The second sequence of recommendations include establishing a field army logistics course to cover all phases of functionalized combat service support for field army logisticians, preparing an Army Subject Schedule for use in orienting newly assigned commanders and logistical personnel in the fundamentals of combat

service support, initiating a branch immaterial logistics familiarization course, teaching a Senior Officer Combat Service Support Logistic Refresher Course, distributing an Infantry School publication which concerns the ROAD division logistic system on an Army-wide basis, and recommending that a DA team be organized to tour CONUS and overseas theaters to emphasize the current problems and concepts of materiel readiness and logistics management.

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Chapter I

SETTING THE STAGE

Introduction. In 1957 a Soviet officer wrote: "Notwithstanding the changes that have occurred in materiel, in the organization of combat units, and in the character of combat itself, the primary mission of logistics remains -- to provide timely and complete administrative support to combat units."¹ Since then the United States Army has undergone a reorganization from the squad level to field army. New equipment has been introduced in all technical areas and at every echelon. However, the mission of logistical support has remained relatively unchanged.

The logistician's function is to develop logistical support plans for the commander and to exercise general staff supervision over logistic operations. His world encompasses the traditional and functional areas of supply, maintenance, labor, construction, hospitalization and evacuation, and transportation. In order to better identify the precise logistical field of interest to a Reorganization Objective Army Division logistician, one must differentiate between wholesale and consumer logistics.

The entire logistical field, from originator to the user, can be divided into two areas: wholesale and consumer logistics.² Wholesale logistics is defined as the total effort required to produce, transport, and service an item in large quantities in rear of the field army boundary. Thus, Continental United States (CONUS) and Communications Zone (COMMZ) logistics fall into this category. That logistic effort which takes place forward of the field army rear boundary, e.g., within Field Army Support Command (FASCOM) and the ROAD divisions, is termed consumer or army-in-the-field logistics. A precise definition is that consumer logistics consists of "the planning for and management of logistic functions of the combat

¹K. Leonov, "Logistical Support of the Soviet Army", Military Review, (April, 1959), p. 90.

²U. S. Department of the Army, Logistic Training in the U. S. Army School System, (Fort Lee, Virginia: USALMC, Jan., 1965) p. 5.

operational forces to include direct and general support logistical operations within the military structure.³ Army-in-the-field logistics is "that portion of the Army Logistics System which pertains to functions internal to the theater of operations, units and organizations deployed in overseas theaters, and field units in the continental United States".⁴ Thus, any study of the ROAD logistical system must be centered about the consumer logistical system as it affects division operations and planning.

Within Department of the Army, the U. S. Army Materiel Command (AMC) has the responsibility for training personnel in all aspects of wholesale logistics. This work is performed primarily at the U. S. Army Logistics Management Center, Fort Lee, Virginia. The U. S. Army Continental Army Command (CONARC), Fort Monroe, Virginia, has consumer training responsibility.⁵ Training in this type of logistics is accomplished at the various branch basic and career courses, specialist and refresher courses, and at the U. S. Army Command and General Staff College.

Problem Definition. The U. S. Army continually studies its posture in the matter of officer training. For example, in 1958 the Williams Board reported that additional logistic instruction should be incorporated into the existing school system rather than to create a separate school to teach consumer logistics. The most recent widely discussed study was the Haines Board which reported to the Army Chief of Staff in early 1966. Many of the Haines Board recommendations are even today being accepted and instituted into the Army officer training system. The Haines Board stated, "that

³U. S. Department of Defense, Study of Management Education and Training within the Department of Defense, (Washington: OASECDEF (I&L), Jan., 1963) p. 18.

⁴U. S. Department of the Army, Dictionary of U. S. Army Terms, AR 320-5, (Washington: U. S. Government Printing Office, Feb., 1966) p. 46.

⁵U. S. Department of the Army, Logistic Training in the U. S. Army School System, (Fort Lee, Virginia: USALMC, Ja. 1965) p. 5.

the generalist education of Army officers comes from the self-evident reality that logistics is less glamorous, therefore, less interesting and inspiring than military operations. Those who control the scope and emphasis of course curricula should not lose sight of the mission of training and educating student officers to understand, to appreciate, and to manage the logistic support essential to the successful operation of land power".⁶

In light of the Haines Board study and the ROAD reorganization which is now firmly established throughout the active army, it appears that a study of the following problem would be both timely and pertinent.

Problem Statement: To evaluate the adequacy of U. S. Army logistics management training in preparing officers for duty in ROAD division key logistical positions.

Problem Approach. The analysis of the thesis problem as stated above can logically be subdivided into a study of the present ROAD division logistical organization, the requirements of the logisticians in terms of logistical knowledge to perform their duties, and the logistical management training which is given at the branch schools and at the U. S. Army Command and General Staff College. After studying these three fundamental areas, the requirements of the job can be matched to the capabilities provided by the training system. An evaluation can then be made as to the adequacy of the system to produce qualified officers for duties as ROAD division logisticians. To summarize, the approach to solving the problem as stated in the problem statement will be as follows:

1. To examine the ROAD division logistical organization. Key logisticians and specialists will be isolated with the object of establishing the degree of technical or logistical knowledge which is available at each logistical echelon to advise or assist in managing the logistical effort. The number and quality of trained specialists has a direct effect on the degree of technical knowledge which the key logistician must personally possess. In addition to examining

⁶U. S. Department of the Army, Report of the Department of the Army Board to Review Army Officer Schools (Haines Board), (Washington: U. S. Government Printing Office, Feb., 1966) p. 617.

the support command and division G4 staffs, a comparison will be made between the composition, by table of organization, of division, corps, and army G4 sections. This examination will be made to determine whether there is any difference of major significance between these three staffs which could affect the quality of technical advice provided to each G4.

2. To determine the scope and depth of knowledge which is required by division logisticians in eight specific logistical areas if they are to adequately perform their duties without extensive on-the-job training.

3. To investigate current logistical management training from the basic courses through career courses, to the U. S. Army Command and General Staff College. This aspect will also include the effects of the Logistics Officer Program (LOP), a specialist program, at division level.

4. To summarize the requirements and balance them against the capability of the current officer training system to determine the adequacy of the system to meet the ROAD division requirement.

5. To propose alternatives or to suggest changes in the current system of officer training which could improve the quality of the potential logistician's background.

Summary. The Haines Board report stated that the "trend toward full functionalization of the logistics system of the army in the field, begun with the ROAD concept, continuing with COSTAR and being refined and extended in TASTA, will be complete in the next decade. The related trend to consolidated supply, maintenance and service functions in CONUS, has essentially run its course. These realignments in the Army logistic structure underline the requirement to clarify training and update curricula in the Army school system".⁷

A detailed, factual, comprehensive study of the overall impact of officer schooling on the ability of the officer to perform in ROAD division logistical assignments is timely and pertinent. It is hoped that through this examination, several concepts can be presented which would improve the effectiveness of current logistical training.

⁷Ibid., p. 7.

Chapter II

THE ROAD DIVISION LOGISTICIANS

Organization and Key Logisticians

Introduction. In any study of the logistic aspect of the ROAD division, it is necessary to investigate the organizational structure and to pinpoint those logistic officer positions that are critical to the division.

Organization. Each of the three type ROAD divisions; infantry, mechanized, and armored, have a common base. The base consists of the following elements:¹ the division headquarters and headquarters company; three brigade headquarters and headquarters companies; division artillery; support command; the aviation, engineer, and signal battalions; an armored cavalry squadron; and a military police company. The division combat capability is altered or tailored by the attachment of varying proportions of infantry, mechanized or armored combat battalions. Support command, which provides logistical support to the division, consists of an administration company, a support command headquarters company and band, a medical battalion, a supply and transport battalion and a maintenance battalion. Appendix A is a set of DISCOM organizational charts which are included as an aid to the reader. The bulk of the logistical operating elements belong to division support command (DISCOM). These units provide supply point and unit distribution of classes I through IV, and control of class V; direct support maintenance (less medical, electronic accounting machines and cryptographic equipment); medical service, medical supply and organization maintenance of medical equipment.² DISCOM units are capable of fragmentation when necessary to tailor logistical support however combat service support is functionalized.

¹U. S. Department of the Army, The Division, FM 61-100 (Washington: U. S. Government Printing Office, June 1965), p. 13.

²Ibid., p. 15.

Functionalization generally means that an organization is organized to accomplish a specific mission or task.³ The functionalized concept is a tremendous benefit to the supported organization since it provides one stop maintenance service and supply, and consequently saves the user both time and effort in obtaining support.

The division headquarters has a G4 section of four officers and eight enlisted men to provide policy guidance and to perform logistical duties.⁴ Each brigade has an S4 section as does each battalion-sized organization. The intent here is not to explicitly discuss every element within the division but to point out those units where the ROAD logisticians may be found.

The key ROAD logisticians are now defined for the purposes of this thesis as the assistant division commander for support, the support command commander and the G4. There are, naturally, other logisticians in the division. The division supply officer, who is also the supply and transport battalion commander, is an example of the other logisticians; but their role is primarily operational. A key logistician is an officer who participates in establishing logistical policy or is the principal logistic operator within the ROAD division.

Assistant Division Commander (ADC). Neither of the two principal references; FM 61-100, The Division nor FM 101-5, Commander and Staff, prescribe duties for the ADC. The ROAD division has two assistant division commanders. They perform tasks as assigned by the division commander.

A recent survey was taken in order to determine the duties which the ROAD division commanders assigned to their ADCs.⁵ In general,

³U. S. Department of the Army, CONUS Logistics and Combat Service Support, RB 101-3, (Fort Leavenworth: USCGSC, 1 April, 1966), p. 18-3.

⁴U. S. Department of the Army, Headquarters and Headquarters Company, Infantry Division, TOF 7-4G (Washington: U. S. Government Printing Office, 31 March, 1966) p. 9.

⁵Elvin R. Heiberg, "Extra Man: The ADC", Military Review, (July, 1965), p. 16.

the poll showed that in widely dispersed divisions, the ADCs were assigned a geographical area of responsibility, or given a specific segment of the division to supervise. Some of the titles reported were: ADC/Support, ADC/Operations, Division Materiel Readiness Officer, and ADC-Other. In some of the armored divisions it is commonplace to find one ADC supervising the three brigades while the other supervises DISCOM, division artillery, the engineer battalion, aviation battalion and the cavalry squadron. One recent suggestion was to change the TOE and actually designate one of the ADCs as the support command commander. In view of the overall responsibility and scope of the DISCOM commander, the idea certainly merits strong consideration. Major General Edwin H. Burba, then the Commanding General, 2d Armored Division, stated, "My ADC (Support) was used to excellent advantage in garrison, inspecting and supervising the maintenance effort" ⁶

Although there are no duties specified, in almost every ROAD division one of the assistant division commanders has been given a full time job in supervising the divisional logistic support.

Division Support Command Commander. The support command commander has both command and logistic support responsibilities. His command duties involve the normal control of the battalions within support command. The following are the control functions: ⁷

1. To exercise tactical control of all division support command units.
2. To organize the movement and direct the disposition of all support command units.
3. To train all personnel and units under his operational control.
4. To recommend priorities for air defense of the division logistic support facilities.
5. To coordinate and implement the rear area security and area damage control plans for logistic support units and essential routes in the division support area.

⁶ Ibid., p. 17.

⁷ U. S. Department of the Army, The Division Support Command, FM 54-2, (Washington: U. S. Government Printing Office, Sept., 1965), p. 24.

The support command commander has a coordinating staff to aid him in the exercise of command. He also has a small special staff consisting of a chaplain, transportation officer and ammunition officer. It is in the logistic support area that the special staff performs its work.

As the principal logistic operator of the division, the support command commander advises the division commander and staff on supply, services and maintenance and the conduct of these logistic functions throughout the division.⁸ He also supervises and controls combat service support operations and conducts inspections to determine the fitness of the division support command to function in the field.

Both the support command commander and his executive officer carry the MOS 2624, Logistical Commander. A detailed listing of the duties and qualifications required of a logistical commander are included in Appendix B.⁹

Although the MOS 2624, Logistical Commander, is used in positions which include that of a logistical command commander, and not all of the qualifications and duties as listed in Appendix B are appropriate to the division support command, it is obvious that an officer with the qualifications listed should have no trouble in technically supervising the elements within support command.

The infantry division support command has 147 officers, 28 warrant officers and 2,092 enlisted men, a total of 2,267 men.¹⁰ The support command staff is similar to the brigade staff. The staff consists of an executive officer and the S1, S2, S3, S4, chemical officer, and chaplain. In addition, the division transportation officer and the division ammunition officer provide certain operational

⁸ Ibid., p. 24.

⁹ U. S. Department of the Army, Manual of Commissioned Officer-MOS, AR 611-101 (Washington: U. S. Government Printing Office, June, 1960), p. 86.

¹⁰ U. S. Department of the Army, Support Command, TOE 29-11G (Washington: U. S. Government Printing Office, 31 March, 1966) p. 5.

as well as staff functions to the division. Both men work in close coordination with the G3 and G4 on matters pertaining to transportation and ammunition. The primary staff officers within support command headquarters are not technically trained. The MOS required in each staff position is S1, 2110; S2, 9301; S3, 2162; and S4, 4010. These specialties are found in brigades and are not specified as to branch.

In order to provide specialist advice to the G4 and the division commander, the support command commander must rely on his subordinate battalion commanders. The medical, maintenance, and supply and transport battalion commanders have support command special staff responsibilities. They provide: (1) advice on those service, supply or maintenance matters for which their battalions are responsible; (2) aid in determining requirements for those supplies or services which their battalions provide; (3) representation, when directed and authorized, in providing advice and assistance to the division commander and staff on maintenance support, supply, transport, and medical services.¹¹

Because of the requirement for dispersion, division headquarters, support command headquarters, and the three major subordinate headquarters of support command may be separated by considerable distances. The three battalion commanders are charged with the duty of providing technical advice to the division commander and staff. They may not be immediately available. It is important that immediate technical advice be available to the division staff. It will be shown that in certain logistic areas technical advice is readily available. In at least two areas, supply and maintenance, there are no technically trained personnel available either at DISCOM headquarters or division headquarters. It is considered that this is a significant weakness in the ROAD organization.

The technically trained personnel within support command are found in the operating battalions and are not at support command level. Because of the normal dispersion of subordinate units, trained personnel such as the division materiel officer and the division assistant

¹¹FM 54-2, p. 29.

supply officer are not located near either support command headquarters or division main. Thus, if a requirement existed to provide technical advice immediately to the division staff, it would be extremely difficult to provide under the present organization.

During the initial planning for the ROAD support command, a Division Logistics Operations Center was utilized to provide coordination for the control of support command units.¹² Later this same concept was termed an Administrative Support Operations Center (ADSOC). The ADSOC was defined as a groupment of personnel of those staff sections and operational units concerned with logistical support operations, area damage control, and rear area security.¹³ This concept, however, was deleted in the latest revision of FM 54-2, September, 1965. The support command command post now performs the function formerly handled by ADSOC or DLOC.¹⁴

Because of similarities between the G4 duties and the support commander's duties, there must exist a close working relationship between them. They must keep each other informed of requirements and capabilities. Also, it is imperative that the division staff "not burden the support command staff with division level planning, development of division level policy and determination of priorities, or to interfere with the internal workings of the support command".¹⁵

A very recent change to the TOE made the support command commander's job a designated career logistician's position.¹⁶ The Logistics Officer Program (LOP) prepares certain officers with special

¹²Robert L. Westbrook, "Armored Division Logistics", Armor, May-June, 1957, p. 58.

¹³Eugene Lee, "Logistics in the New ROAD Division", Review, March-April, 1962, p. 51.

¹⁴FM 54-2, p. 31.

¹⁵Ibid., p. 30.

¹⁶TOE 29-11G, p. 6.

training in logistics for duty in the career logistician's positions. As an index of the quality of a career logistician, one must have the following background in order to become certified under the provisions of AR 614-132:¹⁷

1. The officer must have over 20 years service.
2. He must be a Colonel.
3. He must be a graduate of a senior service school.
4. He must have performed in an outstanding manner in logistics assignments or in a related area.

G4. "The crying necessity for people who know logistics, and who know also how to get logistics tasks accomplished through organizations composed of people, is so evident as to dictate the requirement for teaching management within the context of logistics skills."¹⁸ This quotation aptly describes the role of the G4 in the ROAD division. Although he is no longer a logistics operator, he must know how to get tasks accomplished in order to be able to establish the details of the logistic support plan. The primary duties of the G4 are listed in Appendix C.¹⁹

Within the ROAD division his most important duties are associated with determining consumption rates and replacement factors, distributing methods for supplies, providing control means for coordinating supply operations and maintaining current information on the status of supplies.

The G4 has a limited staff to aid him in these tasks. Appendix D is an extract of a table of organization which shows the division level G4 organization.²⁰ There are only three officer assistants,

¹⁷U. S. Department of the Army, Nomination and Selection for the Logistics Officer Program, AR 614-132, (Washington: U. S. Government Printing Office) p. 2.

¹⁸Bernard S. Waterman, "The Nurturing of the Late Blooming Logisticians", Signal, April 1959, p. 35.

¹⁹U. S. Department of the Army, Commander and Staff, RB 101-5 (Fort Leavenworth: USCGSC, 15 July, 1966) p. 139.

²⁰TOE 7-4G, p. 9.

all MOS 04010, to assist the G4. Normally one assistant G4 monitors the division maintenance status, a second surveys the supply situation, while the third concerns himself with all types of services.²¹ None of these officers are required to be technical service officers. The general duties and qualifications of MOS 04010, Supply Staff Officer, are shown in Appendix E.²² The qualifications are quite general. In fact, the training required is that an officer have had only a "basic course for regimental or battalion staff or have had equivalent military training or experience".²³ The G4 section must be organized in combat to operate on a twenty-four-hour-day basis. In addition to his normal duties, the G4 must find time to make staff visits and to maintain the logistic estimate. His small staff must rely heavily on the technical advice available from within support command or from higher headquarters.

At corps G4, the staff is normally divided into branches. Appendix F is a listing of the various grades and military occupational specialties found on the corps G4 staff.²⁴ These officers and enlisted men are grouped into the administrative branch, plans and operations branch, supply and maintenance branch and the service branch.²⁵ There are trained officers available at this level from six different technical or administrative branches in addition to the branch undesignated positions. Traditionally, prior to COSTAR, the technical service officers at corps headquarters were members of the special staff. They still provide information and exercise technical supervision over certain areas of the logistic spectrum. However, they are now a part of the G4 section.²⁶

²¹RB 101-5, p. 97.

²²AR 611-101, p. 127.

²³Ibid., p. 127.

²⁴RB 101-5, p. 98.

²⁵Ibid., p. 99.

²⁶Ibid., p. 101.

Field army headquarters is organized in a manner similar to corps. There is an administrative branch, a supply branch, a plans and operations branch, a movements branch and a maintenance branch.²⁷ Appendix G shows the branch, rank and title of the field army G4 section.²⁸ As in the corps G4 section, there are several trained officers of the various technical services to provide advice and technical supervision on a functionalized basis. These officers assist the G4 in the fields of supply, maintenance, transportation and other services.

The division G4 has many duties to perform, as mentioned previously. His supervisory influence extends into all of the logistic fields. He aids in planning operations, in managing supplies, in providing services and facilities, in controlling procurement and in managing funds.²⁹ He is charged with other responsibilities in the materiel readiness field which do not yet appear in doctrinal literature. Yet, at the division level, he does not have the variety of technical advice which is readily available to the support command commander, the corps G4, and the army G4.

Other Logistics Specialists. There are many commanders or officer specialists who provide technical advice and supervise portions of the logistic support within the ROAD division. Generally, these are the battalion commanders of support command, the maintenance battalion commander, the medical battalion commander, and the supply and transport battalion commander, the engineer battalion commander, the aviation battalion commander, and the signal battalion commander.

²⁷Ibid., p. 100.

²⁸Ibid., p. 99.

²⁹U. S. Department of the Army, Career Planning for Army Officers DA Pamphlet 600-3, (Washington: U. S. Government Printing Office), June, 1963, p. 103.

The later three are separate battalion commanders. The division transportation officer and the division ammunition officer also act in a special staff role.

The medical battalion commander advises and assists the support command commander and staff on those medical service matters for which his battalion is responsible. He also advises in the determination of requirements for medical support and, when authorized by the support commander, represents him in providing advice and assistance to the division commander and staff.³⁰

The maintenance battalion commander provides advice to the support command commander on all maintenance support matters for which he is responsible. When directed and authorized by the support command commander, he also advises and assists the division commander and staff on maintenance support operations. Finally, he assists the support command commander in exercising technical supervision over maintenance operations and training.³¹

The supply and transport battalion commander, who is also the division supply officer, provides essentially the same type of advice and assistance as the other battalion commanders to the support commander and division commander in those supply, transport, and service areas for which he is responsible.³²

The division transportation officer is a member of the support command headquarters and headquarters company. He closely coordinates his activities with the G3 and G4 but his actions are subject to the approval of the support command commander. The transportation officer provides advice on operations of surface transportation units, transportation capabilities of divisional units and transportation requirements for tactical units. He also calculates march tables, prepares

³⁰FM 54-2, p. 29.

³¹Ibid., p.29.

³²Ibid., p. 29.

loading plans for administrative movements and tactical movements, recommends operating procedures for transportation units and assists in controlling surface transportation assigned to the division for logistic support. He aids in selecting the main supply route, in preparing the division operation order and in controlling movements.³³ The division transportation officer also provides services to the G3, G4 and other elements of the division.

The division ammunition officer is a member of support command headquarters. He maintains liaison with the G3 and G4 as authorized by the support command commander. He assists the G3 in establishing the required ammunition supply rate. He controls the issue of ammunition in accordance with the available supply rate, submits reports to G4 and G3 as required, and supervises the ammunition supply activities within the division. The ammunition officer recommends the location of the ammunition supply points required to support the division.³⁴

Although not members of support command, the engineer, aviation and signal battalion commanders provide technical advice and assistance to the G4 and support command commander in areas which correspond to their combat support roles. For example, the engineer battalion commander provides advice on the logistic requirement to emplace mines or field fortifications during a defensive operation. The aviation battalion commander, who is also the division aviation officer, works with the division transportation officer and the G4 in estimating the requirement for organic airlift in a resupply operation. These commanders have a dual role as division special staff officers and commanders. They are provided with qualified assistants who normally remain at division headquarters to assist in planning for future operations.

Summary. The key logisticians in the ROAD division are the assistant division commander, the support command commander, and the G4. Each has specific duties to perform in either logistical supervision, operation or planning. The qualifications of the support

³³Ibid., p. 26.

³⁴Ibid., p. 28.

command commander and the G4 are clearly prescribed in appropriate publications as are the table of organizations for their staff sections. There are technical specialists available within support command to provide advice and assistance to both the support command commander and the division commander and staff. The corps and army G4 sections are staffed with technical service officers who are readily available to advise the G4 and to supervise those logistic areas in which they are qualified. The division G4 section does not have the number nor the quality of technically trained officers as are readily available to provide advice and assistance to corps and army G4 sections.

Chapter III

SCOPE OF LOGISTIC KNOWLEDGE

Introduction. In July, 1950, Brigadier General Crump Garvin arrived in Taejon, Koera, to aid the 24th Division in stemming the southward drive of North Korean Forces. He was ordered by Major General William F. Dean, the division commander, to Pusan to begin the movement of supplies and equipment northward. Because of the tremendous confusion and the lack of organizational and logistic help, General Garvin had to solve many problems for which, as he said, "there were no answers in our reference books". He encountered personnel problems, transportation shortages, port capacity limitations, railroad rolling stock shortages, hospitalization and patient evacuation problems, untrained local laborers, clothing shortages, prisoners of war to guard and feed, bulk tonnages of ammunition to move forward, and an inadequate command structure.¹ The summer of 1950 was probably one of the logistical low water marks in recent military history. Many of those problems were not new. The same problems had been solved successfully not more than six years before in both Pacific and European theaters of war.

Since 1950, the U. S. Army has passed through other crises, both operational and logistical. Of the various logistic factors which were identified as problems by General Garvin, seven of them are of interest to the ROAD division logistician. These factors are labor, construction, maintenance, medical evacuation and hospitalization, transportation, supply, and ammunition. If serious logistic problems of the kind which plagued the 24th Division in Korea are to be avoided, then some measure or yardstick of knowledge required should be developed concerning each logistical factor.

In this chapter each of the above factors will be investigated to determine the background information which the ROAD logistician should possess before assuming his duties. Such prior preparation should prevent a serious loss of unit or staff efficiency while the incumbent prepares himself through on-the-job training.

¹Crump Garvin, "Pitfalls in Logistics Planning", Military Review, (April, 1962), p. 2.

Labor. Within the ROAD division the military personnel organic to the division fulfill most of the labor requirements. Because a ROAD division in combat is normally in close proximity to the enemy, it would be difficult to hire civilians to perform routine labor tasks. However, in certain kinds of terrain, such as in mountains or jungles, it is conceivable that some form of labor unit might be needed. It is, therefore, a requirement that the ROAD logistician know something about labor.

There are at least three categories of labor units which are available to the ROAD logisticians. These units are a service company, a type B unit, and a U. S. prisoner detail. A service company is composed entirely of U. S. soldiers and generally would be more responsive to U. S. direction and leadership than the others. A type B unit has U. S. non-commissioned officers and civilian local nationals who actually perform the work. Prisoners may also be required to perform manual tasks but would obviously require guards and be less motivated than either the service company or the type B units. The key ROAD logistician must be acquainted with the various kinds of labor units, their capabilities and limitations, and the channel through which such aid is requested.

Prisoners of war (PW) could not be used to perform labor in support of military operations. Because of the restrictions imposed by the Geneva convention of 1949, prisoners of war may only be used for certain specified tasks of a non-military nature.³ Therefore, prisoners of war could not legally be used as a labor force by the ROAD logisticians.

In addition to a knowledge of the types of units available to him, the key ROAD logistician should also be capable of determining labor requirements, allocating his resources, and properly managing the labor pool.

Construction. The key ROAD logistician must know engineer unit organization, capabilities, and limitations. He must be able to calculate class IV requirements and seek technical advice from the assistant division engineer (ADE).

²RB 101-3, p. 34-6.

In a combat zone there are a variety of engineer units which perform combat engineering or construction tasks. The divisional engineer battalion performs road maintenance, barrier construction, fortification, and airfield construction. Actual construction work on bunkers, access roads, and firing emplacements is done by combat units with limited technical advice from engineer supervisors.

Larger tasks of a major nature are accomplished by either elements of the corps engineer brigade or an engineer construction battalion from the advance logistical command (ADLOG) in the communications zone. There are no construction battalions organic to field army.

Because of materiel shortages in active theaters, only construction of a non-permanent nature is normally authorized. Therefore, only a minimum amount of construction other than that of a combat engineering nature is performed in the ROAD division area.

Technical advice is available to the key ROAD logisticians from the divisional engineer battalion. The engineer battalion commander is charged with providing engineer advice to the division commander, the G4, the support command commander and the other commanders or staff officers in the division who seek such advice. The assistant division engineer (ADE) is stationed at division headquarters to provide immediate assistance. Because of the availability of the ADE there is no requirement for the key ROAD logisticians to be technically competent in the construction field.

In peacetime, ROAD logisticians are frequently involved in installation planning boards, construction justification, budget preparation, and construction programs. A detailed knowledge of the Army Command Management System (ACMS) and the legal basis for construction authorizations is invaluable in soundly managing an installation.³

In summary, the key ROAD logistician must recognize engineer unit capabilities and limitations; estimate construction requirements for field fortifications, roads and barriers; and seek technical aid from the ADE when required.

³U. S. Department of the Army, Selected Readings in Management, RB 20-5, Vol. III, (Fort Leavenworth-USCGC 1 Sep. 1966) p. 28-1.

Ammunition. The division ammunition officer (DAO) is a special staff officer on the support command staff. He usually is located in the vicinity of the ammunition supply point which is established in the division area by elements of the field army support command ammunition brigade. The DAO is the ammunition technical expert within the division. The ROAD logisticians influence the allocation of ammunition within the available supply rate (ASR) to concentrate combat power. The G4 announces the ASR in the division administrative order after coordinating with the G3.

There are two basic reasons for the logistician to be concerned about ammunition. First, the weight of basic loads and the transportation required to move replenishment ammunition is of great concern to the G4 and the support command commander. The basic load for an armored division weighs 2,950.49 tons.⁴ Of the total amount, 1,559.57 tons is carried in bulk, not on combat vehicles or on individuals but in vehicles or trailers. Thus, a significant amount of division transportation is committed to moving or storing ammunition.⁵ Secondly, future operations may require divisions to operate from protected bases rather than from behind a conventional front line. The division support command may be called upon to operate an ammunition supply point (ASP). Normally, the FASCOM ammunition brigade provides an ASP within or near the division support area. In isolated operations, the DISCOM may have to operate an ammunition supply point. The troops to man the ASP would come from either the S&T Battalion or support command headquarters company. The point considered here is that the operation of an ASP is an unusual requirement which could be placed on DISCOM. The support command should, therefore, be prepared to assume this role. The key ROAD logisticians should also be ready to manage and direct such a special operation.

Even though the DAO performs technical inspection on the division basic load of ammunition, the ROAD logisticians must know

⁴U. S. Department of the Army, The Division, RB 61-1, (Fort Leavenworth: USCGC, 1 August, 1966) p. 531.

⁵Interview with Col. C. E. Lawing, Deputy Director, DLUO, USACGSC, Fort Leavenworth, 1 February, 1967.

storage principles and inspection procedures. Ammunition requires inspection and maintenance in order to function properly. Just as the ROAD logistician must be familiar with preventive maintenance principles on vehicles or weapons, so must he be able to inspect basic loads as a part of his supervisory role. In so doing, the ROAD logistician can check on the effectiveness of the DAO.

In summary, the ROAD logisticians must have an understanding of ammunition supply, storage, inspection, movement, and accountability in order to properly supervise the ammunition service within the division.

Transportation. Transportation is a service which involves the movement of personnel and materiel as well as the necessary control facilities to accomplish such movement.⁶

Within the ROAD division the transportation officer operates under the control and supervision of DISCOM headquarters. The transportation officer (1) receives, correlates, and disseminates highway information; (2) regulates the use of highways; and (3) issues route clearances, prepares convoy schedules, consolidates march tables, and instructs users in movements over regulated routes.⁷ The transportation officer receives requirements for tactical movements from the G3 and for administrative movements from the G4.

There are several transportation units available to the ROAD division. The transportation motor transport company of the supply and transport battalion has a medium truck platoon and three light truck platoons. These elements are used to provide (1) transportation for unit distribution of all classes of supply except class V; (2) transportation for the division reserve supplies, and (3) transportation to displace division headquarters, the administration company, and other elements as required. Additional transportation units may be composed of either light trucks, medium trucks, petroleum trucks, or aircraft and these units are found in the transportation brigade of FASCOM. A typical transportation brigade is composed of over 17,000 men assigned to various units.⁸ The division transportation

⁶RB 101-5, p. 90.

⁷RB 101-3, p. 26-9.

⁸RB 101-1, p. 29.

officer and the ROAD logisticians must know the capabilities and limitations of these supporting service organizations. The FASCOM transportation brigade provides most of the non-divisional transportation services and a detailed knowledge of its organization, employment, and capability is necessary if the ROAD logistician is to effectively coordinate the available combat service support.

The G4 has a special role in transportation service. He is responsible for providing the transportation means, allocating transportation in accordance with established procedures, and controlling movement. Traffic control regulation is planned by the provost marshal, but transportation movement is planned by the transportation officer. The G4 must coordinate and supervise both traffic control regulation and transportation movement.

In summary, the division transportation officer is a special staff officer at DISCOM. He is available to provide immediate technical advice in the transportation area. His availability decreases the amount of precise detailed knowledge which the key ROAD logisticians must know. However, they must be aware of the procedures and organizations through which transportation is controlled and directed.

Medical Service. The ROAD medical battalion provides medical treatment and evacuation within the division. Medical service is provided at the unit level, at the brigade trains level, and at the division support command level. Evacuation and hospitalization in rear of the division area is provided by elements of the FASCOM medical brigade.

The medical battalion provides the following medical services to the ROAD division: (1) operation of the division clearing station, (2) ambulance evacuation of patients from unit medical treatment facilities, (3) medical supply and organizational maintenance of medical equipment, (4) emergency dental treatment, and (5) limited psychiatric service.⁹ The medical battalion commander, in addition to supervising the activities of his battalion, must also advise the DISCOM commander, the division staff, and the division commander on matters pertaining to medical support. The three medical companies

⁹FM 54-2, p. 19.

of the battalion operate ambulance platoons and clearing stations in the brigade trains areas. The headquarters and support company operates like facilities in the division support area.

The FASCOM medical brigade operates a mobile army surgical hospital near the division rear area, evacuation hospitals, dispensaries, and a convalescent center.¹⁰ Patients are evacuated from division clearing stations by the medical brigade operating elements.

The division surgeon is a special staff officer. He normally works at division headquarters in planning, coordinating, and supervising medical activities throughout the division. The division surgeon is available to provide professional advice to the ROAD logisticians.

Medical service is highly professional in character. There are two specialists available to advise the ROAD logisticians. These are the medical battalion commander and the division surgeon. Even though such advice is available it must be borne in mind that the commander is responsible to provide adequate and proper medical care for his command.¹¹

In view of the technical advice available at DISCOM and at division level, the key ROAD logisticians do not need to be technically qualified in the medical field. A basic knowledge of the medical support units, their location, and capabilities is all that is required.

Supply. Within the ROAD division the bulk of the supplies are handled by the supply and transport battalion. The S&T battalion provides the following services:¹²

- (1) All items of supply except class V, medical supplies and equipment, aircraft parts and supplies, cryptographic material, water, repair parts, and airdrop equipment.
- (2) Reserve stocks of classes I and III and selected fast moving classes II and IV.
- (3) Transportation for logistic support operations.
- (4) Transportation for tactical movement when required.
- (5) Bath facilities when augmented.
- (6) Map supply.

¹⁰RB 101-3, p. 38-22.

¹¹RB 101-3, p. 29-3.

¹²FM 54-2, p. 20.

- (7) Graves registration service when augmented.
- (8) A division salvage collection facility.
- (9) Limited purchasing and contracting.
- (10) Advice to division units on food service matters.

In general, classes I and III supplies are drawn by using units from forward distribution points in the brigade trains areas and in the division support area. Classes II and IV are normally not stocked at forward distribution points but may be if required.

The S&T battalion commander's duties were described in chapter II. He is the division supply officer. In this capacity, he is frequently called upon to advise, instruct, and provide aid to all of the battalion and separate unit commanders within the division. He does this in addition to his duty of advising the support command commander, division commander, and the division staff.

A recent S&T battalion commander said: "Every officer should be thoroughly familiar with the fundamental principles of supply. He should know the classes of supply, the meanings of stockage objective, safety level, requisitioning objective, and the MIISTrip procedures. He should know the requisitioning procedures so well that he can personally inspect the supply records at organizational level. He should be able to inventory the authorized organizational stockage lists and determine the condition of the stocked items of supply."¹³ The ability to troubleshoot the supply system from the company level through to the division supply office is one which the key ROAD logistician must possess.

In addition to a knowledge of the functioning of the supply system, the ROAD logistician must have a knowledge of supply accountability, budgetary operations, inventory control, and the organization of the FASCOM supply system.

The G4 must supervise the calculation of supply requirements. These fall into four categories:¹⁴

- (1) Initial supply requirements.
- (2) Replacement and consumption requirements.

¹³Interview with Col. C. E. Lawing, Fort Leavenworth, 1 February, 1967.

¹⁴RB 101-3, p. 24-8.

(3) Reserve requirements.

(4) Operational project requirements.

The significance of supply requirement calculations is that only through this technique can the ability of the logistic system to support operational requirements be estimated. Estimates of the ability of the supply system to support operations are prepared by the G4 and his staff after considering the assets, requirements and the differences between them.

ROAD logisticians must not only be aware of the supply situation and the logistic support which can be provided for future operations, but they must be able to inspect and supervise the supply system from the unit level to the FASCOM interface.

Maintenance. Maintenance is any action taken to retain materiel in a serviceable condition or to restore it to serviceability. It includes inspection, testing, servicing, classification, repair, overhaul and reclamation.¹⁵ Although there are four categories of maintenance -- organizational, direct support, general support, and depot -- only the first two are performed in the division.

Organizational maintenance is that maintenance authorized for, performed by, and the responsibility of a using organization on equipment in its possession.¹⁶

Direct support maintenance is that maintenance which provides on-site repair, where feasible; replacement of assemblies and components; delivery of parts to the user; and technical assistance. This includes a direct exchange which consists of supplying to the user serviceable items for unserviceable assemblies, components, and end items.¹⁷ Direct support maintenance is limited to the repair of end items which are then returned to the user at organizational level.

Within the ROAD division the maintenance battalion performs the direct support function. The maintenance battalion provides:¹⁸

(1) Direct support maintenance for all materiel except medical, electrical accounting, and cryptographic material.

¹⁵ Ibid., p. 9-1.

¹⁶ Ibid., p. 9-5.

¹⁷

(2) Obtaining, accounting, and issuing selected maintenance float items.

(3) Supply of repair parts.

(4) Operation of maintenance collection points and the provision of evacuation service.

The maintenance battalion has five companies; three forward support companies, an aircraft maintenance company, and a main support company. The maintenance battalion performs approximately 75 percent of all direct support maintenance which is necessary to properly support the ROAD division.

A non-divisional organization, the division direct support maintenance company, which is organic to the general support group of the corps support brigade of PACOM, performs that direct support maintenance and evacuation which exceeds the capacity of the division maintenance battalion.¹⁹ An interesting feature of this company is that in an emergency it can replace a forward support company or the main support company of the divisional maintenance battalion. The ROAD logistician must have a basic understanding of the functions and organization of the maintenance battalion and the non-divisional supporting company. In addition to functions and organization, he must be familiar with the maintenance management record system.

The Army Equipment Record System (TERS) is a complicated system of recording the maintenance services performed on equipment. TM 36-750 is the guide for this maintenance management system. At the unit level many maintenance problems can be traced to improper records management and poor maintenance services. Vehicle or weapon log books which do not accurately portray the actual condition of the end item tend to degrade the effectiveness of the maintenance system.

Another related but separate maintenance area is the measuring of unit readiness by Equipment Serviceability Criteria (ESC). These criteria enable units to classify equipment into one of three conditions of combat serviceability: green (operational), amber (operational with limited reliability), and red (nonoperational or unacceptable reliability).²⁰ ESC scores are reported to higher headquarters and

¹⁹Ibid., p. 22.

²⁰RB 101-3, v. 9-6.

reflect the unit readiness for combat. Such extreme emphasis has been placed on the accuracy of these scores that one former battalion commander in a ROAD division reports seeing a major general, the division commander, personally performing the ESC check on his one-quarter-ton vehicle.²¹ The intent here is not to suggest that each officer from the grade of major general to lieutenant perform an ESC evaluation on his vehicle. ESC has received such emphasis recently that such an act by a division commander was undoubtedly done to stimulate command interest. From a maintenance management standpoint, it would be very inefficient to expect management personnel, such as platoon leaders, to actually perform maintenance inspections. However, it is certainly expected that such managers be competent in performing such checks in order that they can instruct men in their charge.

Much command emphasis is placed on the materiel readiness condition of a unit. AR 11-14 entitled "Materiel Readiness", requires the appointment of a materiel readiness officer at all levels.²² The regulation suggests that one of the assistant division commanders be appointed as the division materiel readiness officer. Therefore, the division commander is expected to be well qualified in even the most detailed aspects of materiel readiness.

The division commander is responsible for the organization within the division to ensure materiel readiness. He recommends training, standards, programs, and procedures. The division commander visits the G4 activities and offices in the division to observe materiel readiness. He also observes the maintenance activities in the division.

The division commander is responsible for the performance of the division commander's duties. The division commander is responsible for the performance of the division commander's duties.

²¹Interview of [redacted] 1 February, 1967.

²²AR 101-5, p. 89.

²³Ibid., p. 89.

aspects of maintenance, and when authorized by the support command commander, he also advises the G4 and the division commander. As discussed in chapter II, TOE provides no officers who have a maintenance technical background on division or support command staffs. Therefore, a requirement exists for key logistics officers at division and support command levels to be especially qualified in all phases of maintenance.

Managerial Ability. In addition to a basic knowledge of the seven logistic areas, the key ROAD logistician must be an effective manager of resources. He should be able to perform the traditional functions of management: planning, directing, controlling, organizing, and coordinating. The ability to effectively manage an organization is not restricted to the ROAD logisticians. Every staff officer and commander is expected to be an effective manager. In the case of the ROAD logisticians, however, the ability to support the operational requirements of the commander can be measured in terms of materials, services, and men.

A logistician who possesses the required amount of technical knowledge but who is a poor manager will undoubtedly be an ineffective logistician. Conversely, a good manager may be able, through on-the-job training, to become an outstanding logistician. A logistician who is also a good manager of resources should be able to assume his duties without a decrease in staff or unit output while he learns the details of his job.

Summary. In the labor and construction areas there is not a great requirement for the ROAD logisticians to have detailed knowledge before assuming their duties. There are specialists available at division level to provide technical help in securing civilian labor and in utilizing it properly within the Geneva Convention framework. The assistant division engineer is readily available to advise on technical aspects of construction. Therefore, the key logisticians need not be technically competent in this field.

Medical service is a professional field which is supervised by the G1, the surgeon and the medical battalion commander. Their professional knowledge appears to provide sufficient background to the ROAD logisticians so that further training in this area is only

necessary in the organizational area. The logisticians should be aware of the FASCOM medical brigade organization and capabilities.

Because of the necessity of the ROAD division to operate independently, some knowledge of ammunition fundamentals is required. The logisticians should possess a basic knowledge of special ammunition storage, handling, escort and security requirements, and conventional ammunition supply, storage, inspection, movement and maintenance.

In the transportation area, the logistician should know transportation procedures, march tables, and the organization of the FASCOM transportation brigade. He should also know the fundamentals of transportation movement and highway control.

A knowledge of supply procedures, the MILSTRIP system, classes of supply, and the ability to predict supply requirements based on past experience is vital to the ROAD logistician. In order to supervise the execution of the supply function it is necessary that he be able to inspect supply records at the lowest level.

Maintenance represents a large problem area for the ROAD logistician. He must be qualified to supervise the maintenance effort from the lowest level to the FASCOM interface. In order to accomplish this, the ROAD key logisticians must be knowledgeable in the areas of maintenance organization, maintenance procedures, ESC standards, and the Army Equipment Record System.

In addition to a knowledge of those technical areas as summarized above, the key ROAD logisticians must be good managers of men, services, and materiel.

In chapter IV, the U. S. Army training system will be reviewed from the basic officer course through the Command and General Staff College to examine the logistics content of the various curricula.

Chapter IV

LOGISTIC MANAGEMENT TRAINING

Introduction. In 1962 Colonel S. N. Homan, Executive for Career Planning, Officer Assignment Division, Deputy Chief of Staff for Personnel, DA, wrote: "Members of the Officer Corps generally agree that the Army needs officers with competency in specialist fields. Rapid, sometimes erratic, strides in technology have outmoded the concept that each officer must be able to perform any job in the Army. As the Army takes advantage of scientific progress, adopting new weapons and devising new organization and tactics to employ them, it becomes more and more apparent that the jack-of-all-trades can be master to none".¹ The U. S. Army has diversified specialist programs and career fields for officers. One of them is the Logistics Officer Program (LOP) which encompasses five functional areas of logistics.

The following are the five functional areas: (1) logistics planning and operations, (2) supply management, (3) services and installations, (4) procurement, and (5) program management.² In chapter II it was shown that within the ROAD division only the support command commander is, by TOE, a career logistician. Other officers, however, of junior ranks may belong to the LOP but may not have attained the status of career logistician. It is recognized that the LOP has a limited influence within the ROAD division. The majority of the training which is received by the key logisticians is gained through attendance at various army service schools and colleges or by on-the-job training. It is, therefore, appropriate to examine the training which the Army provides in the logistic management field.

¹S. N. Homan, "Officer Specialization Program", Army Information Digest (February, 1962) p. 39.

²U. S. Department of the Army, Career Planning for Army Officers, Pamphlet 600-3, (Washington: U. S. Government Printing Office, (June, 1963) p. 103.

At Department of the Army, the Deputy Chief of Staff for Personnel (DCSPER) has general staff responsibility for individual training.³ He develops training concepts, policies, and programs for individuals within the Army. Continental Army Command (CONARC) has responsibility for operating branch schools to provide individual training to officers. The branch schools provide training to fill officer positions at the lower unit level. The Command and General Staff College provides training to fill command and staff positions at division, corps, field army, and theater level.⁴ Above theater level the U. S. Army Materiel Command (AMC) and the senior service colleges provide training.⁵

In this examination of logistic training, the influence of individual officer experience as gained from on-the-job training will not be considered. It is acknowledged that the past experience of an individual may provide him with a stronger background in logistics than another whose experience was in a different functional area. However, such experience cannot be measured and analyzed objectively, thus, for the purpose of this study, it must be assumed that the logistics management background which an officer possesses at the time of his assignment to a key ROAD logistician position has been derived entirely from recognized DA schools or colleges.

With the scope of this investigation thus defined, the initial step will be to examine the logistic training at the various branch schools and the Command and General Staff College.

Branch Schools. There are nine schools of the combat, combat support, and combat service support branches which conduct instruction pertinent to preparing officers for duty in ROAD division. The instruction is oriented towards training junior officers to perform at the company or battalion staff level. Col. Keith L. Lewis wrote the following concerning the logistical course content at branch schools: "... the amount of time devoted to that training specifically identifiable as logistical, varied from 8 percent in the combat

³U. S. Department of the Army, Logistic Training in the U. S. Army School System, (ALMC, Fort Lee, Virginia, March 1962) p. 14.

⁴Ibid., p. 5.

⁵Ibid., p. 5.

arms career courses to about 40 percent in the typical technical service course".⁶

The Haines Board examined the maintenance and supply content at nine branch schools. The percentage of the course and hours devoted to each subject are tabulated below:⁷

<u>Branch</u>	<u>Maintenance (hours)</u>	<u>Supply (hours)</u>	<u>% Course</u>
Infantry	21	20	4
Armor	94	8	8.5
Artillery	54	45	10.5
Engineer	14	79	7.3
Signal	25	26	5.7
Chemical	44	99	14.7
Ordnance	33	103	18.0
Quartermaster	39	134	23.7
Transportation	18	74	8.9

The Haines Board further commented that the focus of instruction in branch school career courses was on the company level in the maintenance areas.⁸ The Board also stated that "a graduate of a troop oriented branch course should be able to render effective service as a battalion or brigade S4".⁹ The Haines Board visualized that in the future a career course graduate should be qualified for direct assignment as a division assistant G4.¹⁰ The Board recognized that the branch schools did not provide training at this level and recommended that the branch schools review their programs to "ensure that supply training meets the general objectives".¹¹

⁶Keith L. Lewis, "Logistics Officer Program - Boon or Bane to the Branch of Service and Participating Officer", Army War College Thesis, (9 March, 1962), p. 12.

⁷U. S. Department of the Army, Report of the DA Board to Review Army Officer Schools, (Haines Board) (Washington: U. S. Government Printing Office, February, 1966), Vol. III, p. 620.

⁸Ibid., p. 620.

⁹Ibid., p. 620.

¹⁰Ibid., p. 620.

¹¹Ibid., p. 623.

Since the Haines Board issued its report in February, 1965, several changes were made in career course programs of instruction. The overall course coverage for the infantry, armor, artillery, engineer, signal, and quartermaster career courses is shown in appendixes H through L. The current maintenance management or identifiable logistics coverage is tabulated below:

<u>Branch</u>	<u>Logistics (hours)</u>	<u>Total (hours)</u>	<u>%</u>
Armor/Infantry	89	1602	5.5
Artillery	31	1056	2.9
Engineer	21	1276	1.6*
Signal	47	1308	3.6
Quartermaster	54	1056	5.2

*The Engineer Career Course offers a 90-hour elective in materiel management. Not all students receive this elective, therefore, it is not included in the calculated percentage. With the elective included the course contains 8.7 percent logistics.

Command and General Staff College. The Command and General Staff College has the mission of preparing selected officers of all components of the Army for peacetime and wartime duty as commanders and general staff officers of divisions, corps, and field armies. Instruction covers logistical systems; the communications zone and its subordinate elements; and a familiarization with the activities of the theater army replacement system.¹² C&GSC has the mission of preparing officers to be ROAD division G4's and support command commanders. After examining the logistic training conducted at the Command and General Staff College, the Haines Board stated: "The C&GSC is the first of the career schools where combat arms, technical, administrative, and professional service officers as a group, study the teamwork necessary for the successful application of landpower. The emphasis in the course is on operational considerations; logistics subjects are usually presented and studied in relation to other staff functions. The emphasis is on consumer logistics. The greater part of the logistics instruction is integrated with other subjects with only four hours of pure logistics instruction. The 149.5 hours of

¹²DA, The Army School Catalog, Pamphlet 350-10, (Washington: Aug., 1962) p. 3-PH-1.

integrated instruction provide 82.9 hours on materiel with particular attention to movement, distribution, and maintenance. Another 28 hours are scheduled in the area of services. The remaining 39.1 hours are divided between personnel movement, evacuation and hospitalization (24.5 hours), and facilities (14.6 hours). The pure logistics instruction is divided between 2.6 hours of maintenance and 1.4 hours devoted to other subjects. The total number of hours of logistics instruction constitutes 14 percent of the entire curriculum. Considering that logistics is one of the principal parts of the Army's activities, this percentage is barely adequate. Additional instruction is warranted under the current objective of the course in the areas of design and development, evacuation, disposal, hospitalization, facility acquisition, maintenance and operations, and service acquisition."¹³

As a further comment on the techniques of logistic instruction at the college, the following comment was provided to a Secretary of Defense Committee: "Students gain additional logistical knowledge by association with other students. Sections and work groups are organized by branch and rank so that each has assigned students with varying background and experience. Through this daily association, those officers with logistical training and experience impart much knowledge to those lacking in experience."¹⁴

The SY 67-68 Regular Course content consists of 1,389 hours of instruction. Of those, 270.9 hours or 19.5 percent are in the combat service support area. On a functional basis the seven areas which were defined as of interest to the key ROAD logistician have the following number of hours taught:¹⁵

Supply	54.3 Hours	3.9%
Maintenance	16.7	1.2
Medical	14.3	1.1
Transportation	26.8	2.0
Construction	4.8	0.3
Labor	1.5	0.1
General	<u>83.5</u>	<u>6.0</u>
	200.9	14.6

¹³Haines Board, Vol. III, p. 618.

¹⁴DOD, Study of Management Education and Training within the DOD, Part IV, OASECDRF(I&L), (Washington: Jan., 1963) P. IV-B-5-6.

¹⁵Interview with LTC Peter Haff, OCRI, C&GSC, Ft. Leavenworth.

These figures reflect logistic instruction covering tactical and non-tactical subjects in all of the departments.

At the division level in the Department of Division Operations, there are 59.6 hours of instruction devoted to the field of combat service support. The following is a tabulation of that coverage:

Supply	13.7 Hours
Maintenance	8.2
Medical	5.8
Transportation	8.5
Logistics General	0.7
Civil Affairs	5.0
Admin. Services	2.1
Personal Services	10.2
Military Police	0.4
	<u>59.6</u>

Of the 59.6 hours only 41.9 hours are actually in the seven areas of logistic interest to the key ROAD logisticians. Appendix M is a recapitulation of the Regular Course at the C&GSC.

In terms of position coverage in the tactical area, there are 122.5 hours of commander related instruction and 50.5 hours of G4 related instruction. The quoted coverage is for commander and G4 functions at all echelons hence that coverage restricted to the ROAD division is less than indicated.

Refresher and Orientation Courses. A refresher course is given for the purpose of bringing the student up to date on recent developments or changes in an area of knowledge in which the student has had previous experience or schooling. An orientation course is given for the purpose of familiarizing the student with a particular area of knowledge, technique, or materiel.¹⁶ The use of a refresher or orientation course could be appropriate for the training of a key ROAD logistician. A search of the Department of Defense Logistics Management Training Catalog failed to uncover such a course. The most related course is the 8A-F6 course, the Senior Officers Preventive Maintenance Course at Fort Knox, Kentucky.¹⁷ This course

¹⁶DID, Defense Logistics Management Training Catalog, (Washington: 1 Oct., 1966) p. 42, Index.

¹⁷Ibid., p. 42

covers the army maintenance system, types of inspections, the establishment of standards, preventive maintenance for nuclear weapons, maintenance accounting, command and staff management of preventive maintenance, use of preventive maintenance indicators, and special presentations by the U. S. Army Maintenance Board.¹⁸ The course is intended for lieutenant colonels and higher ranks, who are senior commanders or staff officers of major commands, continental U. S. armies, corps, divisions, brigades, battalions, posts, camps or stations, or for chiefs of military advisory groups and their staffs.

The Command and General Staff College conducts two special resident refresher courses for reserve component officers. Each of these courses is one week in length. The Officer Refresher, Logistical Command, (1-250-C6A), is conducted once a year and the Refresher Course, Combat Division, (1-250-C6B), is conducted twice a year.¹⁹

The Logistical Command Refresher Course provides military training and education as a unit to commanders and staffs of Army Reserve logistical commands, to include the principles and techniques of combat service support provided by a communications zone for one or more field armies. The scope of this course is too broad to be of value in training key ROAD logisticians.

The Combat Division Refresher Course provides refresher training as a unit to commanders and staffs of National Guard armored, mechanized or infantry divisions, and Army reserve maneuver area commands. The course develops staff teamwork and instructs in the application of current doctrine.

Both of these courses are summaries of resident courses, are of short duration, and train staffs to work together. These courses are not oriented towards the ROAD division logisticians' requirement.

Logistics Officer Program. The Logistics Officer Program is a specialist grouping of officers who possess a strong background in

¹⁸U. S. Department of Defense, Defense Logistics Management Training (Washington: OASECDEF (I&L), July, 1965), p. 42.

¹⁹DA Pamphlet 350-10, p. 3-PH-3.

logistics. As pointed out in the introduction to this chapter, the logistics program is a method whereby certain officers are channeled into key logistics areas. Through repetitive logistics assignments, these officers develop logistic skills and may eventually become career logisticians. A career logistician is so designated by DA after he meets the following criteria:²⁰ (1) have more than 20 years service, (2) be in the grade of colonel, (3) be a graduate of a senior service school, (4) and have served in a key logistics position and performed in an outstanding manner. Since the LOP is a form of logistics management training, it is pertinent to review the program.

AR 614-132 covers the nomination and selection of officers for the LOP. In order to be accepted into the program, an officer must meet the following:²¹ (1) be a field grade officer, (2) have performed in an outstanding manner in a logistics assignment (or a related area), (3) indicate a desire to participate in the program, and (4) have sufficient active duty time remaining to be able to serve at least one normal tour in a designated LOP position. Logistic positions are branch immaterial logistics positions which require officers with the background of logistics experience and training possessed by officers in the grade of major and lieutenant colonel who are participating in the program.

There are five functional fields of logistics which are within the scope of the LOP. These fields and several subordinate elements of each field are listed below:²²

1. Logistics Planning and Operations - logistics troop basis, base development, operational requirements of logistical commands, arsenals, depots, and ports.
2. Supply Management - requirements; storage, distribution, and disposal.
3. Services and Installations - communications, construction,

²⁰Logistic Training in Army School System, p. 43.

²¹U. S. Department of the Army, Nomination and Selection for Logistics Officer Program, AR 614-132, (Washington: U. S. Government Printing Office) p. 2.

²²DA Pamphlet 600-3, p. 103.

hospitalization and evacuation, maintenance, movement, control, real estate, repairs and utilities, transportation, and traffic management.

4. Procurement - purchasing and contracting, specifications and standards, contractor performance, termination.

5. Program Management - program coordination, logistic budgeting, funding management, review and analysis management, and control systems.

At least two of these areas are within the scope of knowledge required by the key ROAD logistician. The program is authorized 1,600 participants. In theory, 600 of the participants are to be in the qualified or career logistician status and 1,000 others should be in the development stage. A recent survey showed that there were 393 in the qualified status and 913 in the development stage for a total of 1,306 participants.²³

Although there are presently no specific schools to train logisticians other than through specialist courses, there have been proposals to create a logistics career course and a senior officers logistics familiarization course. The latter course was to have been 240 hours or 8 weeks in length.²⁴ Neither of these courses were ever originated but they would have served to help create a skilled body of trained logisticians.

The Haines Board stated that the LOP should receive further high level impetus and direction to assure its success.²⁵ Two specific recommendations were to direct cooperative action between DCSLOG and DCSPER in the derivation of policy, selection of participants, and the designation of logistics positions; and to suggest that LOP participants who are selected for a senior service school be sent to the Industrial College of the Armed Forces (ICAF).

The LOP is significant to this study of the key ROAD logistician. Although by TOE only the DISCOM commander is designated as

²³Logistic Training in Army School System, p. 43.

²⁴DA, Logistics Training, Phase I, Individual Officer Training, CDC, CSSG, (Fort Lee, Virginia, 1 March, 1962) p. C-11.

²⁵Haines Board, p. 52.

a career logistician, it is possible that a field grade officer who is a program participant could be selected and assigned to the G4 position. With the present total of 16 U. S. Army divisions, this would represent a usage of only 16 LOP participants. Certainly the very existence of such a specialist program tends to bring together officers with a logistics background, fosters cooperation on an informal basis between participants, and develops professionalism in this area.

Summary. In chapter IV, the logistic content of nine branch schools and the Command and General Staff College was investigated. Branch school logistics instruction is directed at too low a level to be useful in training key ROAD logisticians. The logistics content of the combat arms career courses is minimal. The Command and General Staff College teaches logistics as 14.6 percent of the total course, however, only 59.6 hours of 1,389 are devoted to division level combat service support. The LOP is a possible source of key ROAD logisticians since participants serve repetitive tours in logistics positions and hence are thoroughly oriented in logistical functional areas which apply to the ROAD division when they reach senior field grade rank.

Chapter V

SUMMARY, ANALYSIS, AND CONCLUSION

Introduction. During the Normandy invasion and the subsequent Allied drive across Europe in 1944, it was a truism that tactics had become the art of the logistically feasible.¹ The role of the ROAD logistician is to plan and supervise logistical support. Because of the complexities of modern warfare, there is every reason to believe that the logistics burden has increased since World War II. The adequacy of the logistics management training which the U. S. Army provides to prepare officers as key ROAD logisticians is the area of investigation of this thesis.

The problem approach was to (1) examine the ROAD division logistical organization, identify key ROAD logisticians, and determine the degree of technical expertise which is available at each staff echelon; (2) determine the scope of logistic knowledge which the ROAD logistician requires in seven functional areas of logistics; and (3) investigate logistic training as presented at the various branch schools and C&GSC, and training obtained through participation in the Logistics Officer Program (LOP).

In chapters II, III, and IV, each of the three phases as outlined above were investigated. It now remains to summarize the findings of these investigative chapters, to analyze the facts, and to synthesize a conclusion concerning the adequacy of the U. S. Army logistics management training in preparing officers for duty as key ROAD logisticians.

Summary. In chapter II it was determined that the key ROAD logisticians are the assistant division commander (ADC) for support, the support command commander and the division G4. Within the DISCOM the medical, maintenance, and supply and transport battalion commanders provide technical advice and assistance to the support command commander. They also provide advice to the division commander and staff.

¹R. G. Ruppenthal, "Logistical Support of the Armies, ETO", Military Review, (August, 1951), p. 3.

It is pertinent to note that in the supply and maintenance areas, there are no technical service staff officers available at division level to advise the G4. However, at corps and army, the G4 section does have technical service officers to provide assistance and specialist advice. The engineer, aviation, and signal battalion commanders have assistants stationed at division headquarters. These assistants provide operational and logistical advice to members of the division staff.

In chapter III seven functional areas of logistics were investigated to determine the extent of knowledge required by the key ROAD logistician if he is to assume his duties without a loss of unit or staff efficiency while he prepares himself. The seven areas are labor, construction, ammunition, transportation, medical evacuation and hospitalization, supply, and maintenance. In the labor field, he must know the types of labor units available within the field army, together with their capabilities and limitations. Most labor in the division area is provided by military personnel. Because of the assistant division engineer (ADE) being located at division headquarters to advise the division commander and staff, there is no requirement for the key ROAD logistician to be technically qualified. It is sufficient if he recognizes engineer unit capabilities and limitations; estimates construction requirements for field fortifications, roads, and barriers; and seeks aid from the ADE when it is required. Because of his supervisory role over the division ammunition officer (DAO), the key ROAD logistician must be able to inspect ammunition, basic load storage sites, and ammunition records. He should have a basic knowledge of special ammunition and the movement problems associated with special weapons. The division transportation officer functions as a special staff officer at DISCOM. Because of his availability there is a corresponding decrease in the knowledge requirement of the ROAD logistician. The logistician must, however, have an understanding of the procedures and organizations through which transportation is controlled. Because of the presence of the division surgeon at division headquarters and the medical battalion commander within support command, the logistician need not be technically qualified in the medical service field. As in the other

areas, he must have a basic knowledge of the medical support units capabilities and limitations. In supply, the logistician must be familiar with the precise details of the supply system so that he can inspect and supervise battalion and company level supply records. He must know MILSTRIP procedures, understand the calculation of supply requirements, and estimate the ability of the supply system to support tactical operations. Because of the lack of a technical service officer at division level in the supply field, the logistician must be more knowledgeable in supply than in the other logistic areas considered thus far. Maintenance is an area of which the logistician must possess the greatest amount of detailed knowledge. Because of his supervisory responsibility over materiel readiness and the command emphasis on sound maintenance, he must be thoroughly familiar with all aspects of the army equipment record system (TAERS). He should know the fundamentals of ESC and materiel readiness reporting. Although the G4 is provided an assistant to supervise the maintenance area, there is no requirement for this officer to be technically qualified. The maintenance battalion commander and his staff members are the sources of detailed technical knowledge. Since these advisors are located with DISCOM and are not immediately available to provide advice at division level, there is a requirement for the ROAD logisticians to be fully informed in maintenance. In addition, the ROAD logistician should be an excellent manager of the men, materiel, and services under his control.

In chapter IV, the logistic management training which is available to train officers to be key ROAD logisticians was considered. At the branch schools, the amount of supply and maintenance training ranged from 5.5 percent of the entire course at the infantry/armor career course to 2.9 percent at the artillery career course. The instruction is directed towards the company, battery, or battalion level, hence is not specifically oriented towards the training of a key ROAD logistician. The Command and General Staff College course contains 14.6 percent in logistics subjects. These are oriented towards all aspects of logistics within the theater army. Only 59.6 hours or 4.3 percent of the total course is devoted to ROAD division level logistics. The number of hours concentrated in division level

logistics in less than two full weeks of instruction. By comparison, the C&GSC course contains 192 hours of counterinsurgency training and 80 hours of nuclear, chemical, and biological weapons employment. There are no refresher courses or orientation courses which apply themselves to the mission of training a ROAD logistician. A related course, which would be useful to the logistician, is the Senior Officers Preventive Maintenance Course at Fort Knox. The logistics officer program (LOP) was investigated. The LOP is significant to this study in that program participants are granted repetitive tours in logistics duties. Many officer participants are trained in this manner and are, therefore, well qualified for key ROAD logistician positions. The LOP represents a prime source of potential ROAD logisticians.

Analysis. It is assumed that an officer who is a key ROAD logistician has had the benefit of at least C&GSC level instruction. It is recognized that there may be officers occupying command and general staff positions in ROAD divisions who have not attended C&GSC. However, in order to compare the knowledge requirements with that provided by schooling, the foregoing assumption is necessary. A comparison between the curriculum of the C&GSC and the knowledge required by the key ROAD logistician should produce a profile of the adequacy of U. S. Army logistics management training as it applies to the key ROAD logisticians.

In the labor functional area, there is little knowledge that the ROAD logistician requires. At division level, advice is available to him from the G5 or G1 and the staff judge advocate. Although the C&GSC offers 1.5 hours of instruction in this subject, the requirement is not large.

The medical and construction areas are both of a professional nature. Adequate advice is available to the ROAD logisticians from either the division surgeon or the ADE at division staff level or from the medical battalion commander at DISCOM level. The C&GSC course contains 4.8 hours of construction instruction and 14.3 hours of medical service instruction. Although the course coverage is not long in either of these areas, the presence of qualified advisors reduces the knowledge requirement on the part of the key ROAD logisticians.

Ammunition coverage in the C&GSC course is restricted to general discussions of the flow of class V stocks. There are no detailed presentations in ammunition fundamentals such as inspection, care, storage, and accountability.

Transportation training at C&GSC amounts to 26.8 hours. However, only 8.5 hours are confined to division level transportation problems. The division transportation officer (DTO) is available as a DISCOM special staff officer. There are no transportation officers at division headquarters; however, the assistant division aviation officer is normally there to provide technical assistance in the field of air resupply. Because of the availability of sufficient transportation advice, the key ROAD logistician's knowledge requirement is reduced.

In the supply field, the C&GSC course contains 54.3 hours. Only 18.7 hours are directed at the division level. The division supply officer, who is also the S&T battalion commander, is located within the DISCOM. There are no technical supply specialists on the DISCOM staff. An assistant G4 is normally detailed to monitor the supply situation but he is not required to be a technical service officer. The knowledge requirement of the logistician is very great in this field. He must be cognizant of many detailed aspects of the supply system in order to properly supervise its operation.

Maintenance training represents only 16.7 hours of the total C&GSC course. There are 8.2 hours directed at the division level. By comparison, the Senior Officers' Preventive Maintenance Course is an entire week which is solely directed towards maintenance management. The logistician must possess a detailed knowledge in this area in order to properly supervise the materiel management, maintenance management, and materiel readiness facets of the logistic problem. The maintenance battalion commander and his staff are located within DISCOM. There are no maintenance specialists available at DISCOM. The assistant G4 who monitors the maintenance effort is not required to be a technical service officer. This increases the knowledge requirement on the part of the G4.

Conclusion. In analyzing the facts presented in this thesis, officer education was considered at the branch course, career course,

Command and Staff College, and special course levels. Course content in seven functional logistic fields was compared to the requirements of the key ROAD logisticians for logistical knowledge. Logistic management training in the supply and ammunition functional areas is inadequate. Logistic management training in the medical and construction areas is adequate. In the labor and transportation areas the training is marginal. If all officers attended the Senior Officers Preventive Maintenance Course prior to becoming key ROAD logisticians, the training in the maintenance field would be adequate. However, if only the training through C&GSC level is considered, the training in the maintenance area is inadequate.

Chapter VI

RECOMMENDATIONS

Introduction. Although recommendations to resolve the problem which was investigated are beyond the stated purpose of this thesis, it is logical to propose steps which could help in improving the adequacy of logistics management training. The recommendations will be in two parts. The first series will be based on the facts as they were presented in chapters II through IV. During the research work many facts or concepts were uncovered which did not have a direct bearing on the problem of training key ROAD logisticians. These facts do have a relationship to training logisticians for duty in the field army. The second series of recommendations suggest areas for further study. They bear on the more general problem of logistics management training and are not limited to that of training key ROAD logisticians. The second series is not supported by facts in the earlier chapters of this thesis.

Recommendation 1. That the Command and Staff College increase the coverage and scope of division level logistics instruction in the functional areas of supply, maintenance, ammunition, labor, and transportation. The logistics coverage at the division level is not detailed enough to satisfy the requirements of the ROAD logistician. Additional depth is required in such subjects as the MILSTRIP system, TAERS, materiel readiness, ammunition inspection and supply accountability, transportation movement, and labor fundamentals.

Recommendation 2. That the division staff G4 section be augmented by the addition of at least two technically trained officers in the grade of major or lieutenant colonel. One of these officers should be an ordnance officer who would function as an assistant division maintenance officer (ADMO). He would function in the same manner as the ADE or the assistant division signal officer in providing technical advice and assistance to the division staff. The second officer would be quartermaster. He would act as the assistant division supply officer at division headquarters. He would be a full time representative of the S&T battalion commander to provide technical advice and assistance at division level. This recommendation would eliminate the problem caused by the lack of sufficient technical advice at division level in the supply and maintenance areas.

Recommendation 3. That a short, four-week course be initiated at Fort Lee, Virginia, to provide instruction in ROAD division logistics to all potential key ROAD logisticians. As an example of the type of course suggested, the Army Materiel Command conducts a four-week course at Fort Lee to train project managers in the technical analysis, planning, and decision making associated with project management. This course is intended for lieutenant colonels, colonels, and appropriate civilians. It is recognized that many graduates of C&GSC do not immediately become ROAD logisticians after graduation. In many cases, five or ten years may pass before the C&GSC graduate is called upon to apply his logistic knowledge. Since logistic concepts, techniques, and doctrine change periodically, it would be well to have a course where nominees for ROAD logisticians positions could be brought up to date. Fort Lee was suggested as a site because it is the home of the U. S. Army Quartermaster School, the Combat Service Support Group of CDC, the U. S. Army Logistics Management Center, and the annual LOGEX exercise. All of these agencies could provide inputs and guest speakers to the course just as the Army Maintenance Board contributes to the Senior Officers' Preventive Maintenance Course at Fort Knox.

Recommendation 4. That the DISCOM staff be augmented with field grade officers of the ordnance, quartermaster, and medical service branches to represent the major subordinate elements of support command and to provide immediate technical advice and assistance to the DISCOM commander. The DISCOM staff does not now have a technical capability provided by the TOE. Just as the division G4 requires additional technically qualified officers, so does the DISCOM commander to aid him in planning, coordinating, and supervising support command operations.

Recommendation 5. That DCSPER, DA direct the assignment of qualified logisticians to ROAD divisions for duty as DISCOM commanders.

Recommendation 6. That division commanders seek qualified career logisticians as DISCOM commanders. Both of these last recommendations are tied together. Since March, 1966, when the ROAD DISCOM commander's position was designated as a career logistician position, LOP trained logisticians have been authorized to be appointed to these

key positions. This fact is not well known. Recommendations 5 and 6 serve to emphasize this fact and increase the probability of career logisticians serving at ROAD division level.

Recommendation 7. That branch career courses increase logistics coverage to at least 10 percent of the total course. Implementation of this recommendation would double the present course coverage in most of the combat and combat support branch career courses. A desirable effect would be that additional emphasis could be placed on training officers in specific areas of combat service support. Ammunition service, supply, and maintenance coverage could be strengthened as well as the logistic background of the career course graduate.

The second series of recommendations has been drawn from research which was not limited to the ROAD division.

Recommendation 8. That the program of instruction as suggested in Appendix N be reviewed as a guide for the course in field army logistics (Recommendation 3). Such a course must necessarily cover all phases of logistics but emphasize those which are needed by ROAD and field army logisticians.

Recommendation 9. That an Army Subject Schedule be prepared at DA level for use in orienting commanders and logistics personnel at division level in the fundamentals of combat service support. Such a schedule would be for a 40-hour period of instruction and would have appropriate film strips and lesson plans. This schedule would be a mandatory orientation subject for all officers entering a ROAD division, a separate armored cavalry regiment, a separate brigade, or corps and army units. An orientation period of this sort, coupled with practical exercises in supply transactions, materiel readiness reporting, ESC evaluations, and other topics as described in this thesis could do much towards improving the materiel readiness posture of the U. S. Army.

Recommendation 10. That a branch immaterial logistics career program be initiated. Such a program was suggested by the U. S. Army Logistics Management Center (USALMC) project 11-62. This provides for a logistics officer career course of 24 weeks and a senior officers

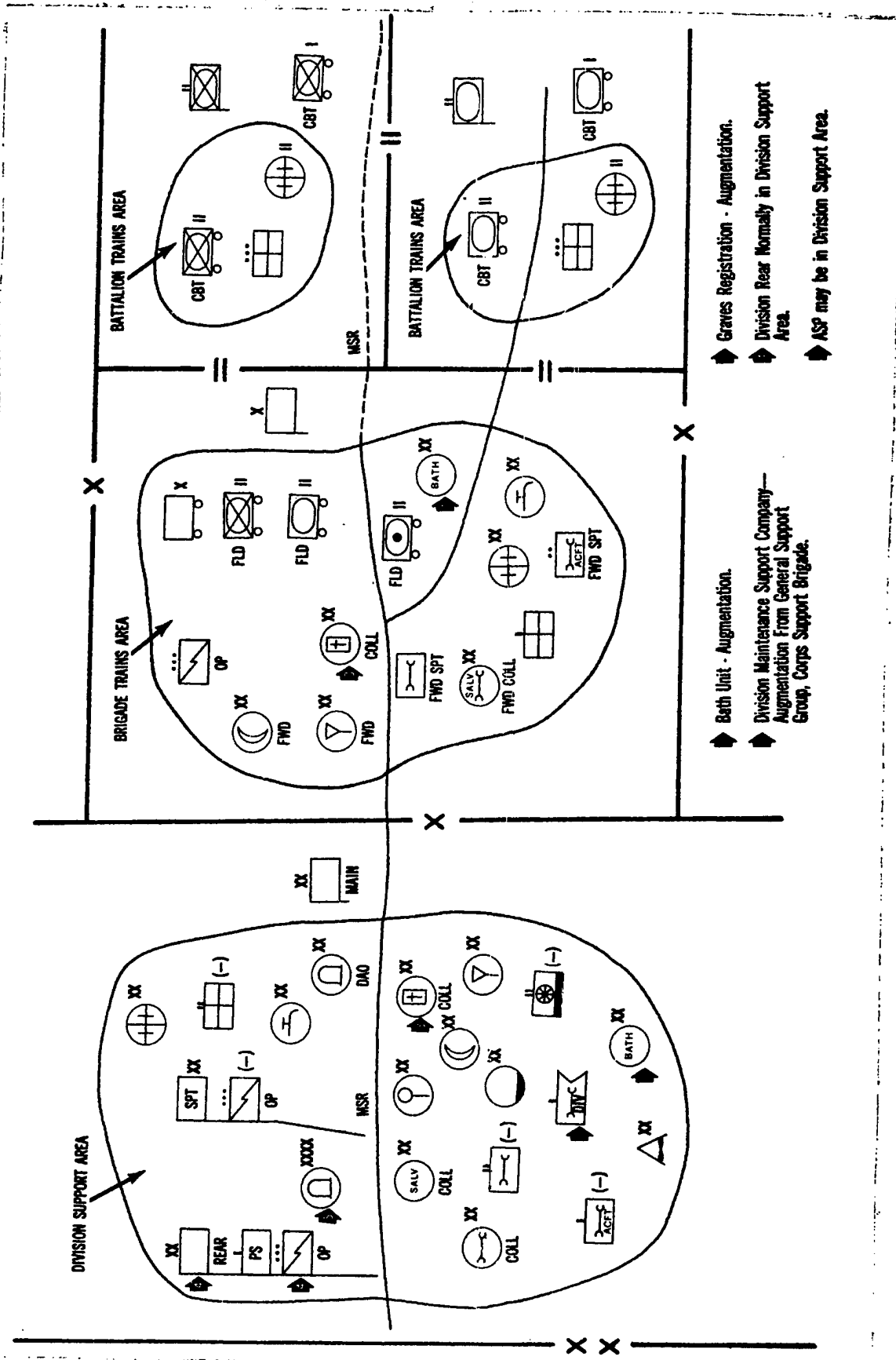
familiarization course of 8 weeks. This program would produce a trained reserve of logistics managers to command and control ROAD and COSTAR units. Training would be given to all members of the LOP in addition to the normal branch materiel career course which the LOP participant must attend. A 24-week course is not lengthy when viewed in comparison with some guided missile officer courses which last for 10 months, or graduate civil schooling courses of one or two years duration.

Recommendation 11. That a Combat Service Support Senior Officers Logistics Refresher Course be initiated at Fort Lee, Virginia. The concept would be similar to the Senior Officers Preventive Maintenance Course (SOPM) at Fort Knox. The course would be attended on the same basis as the SOPM and be oriented towards briefing senior commanders and key staff officers on the critical trouble spots in the current combat service support situation.

Recommendation 12. That the handbook entitled Combat Logistics Handbook be distributed on a broad basis throughout the U. S. Army. This handbook was published by the Infantry School, Fort Benning, Georgia. It is a fine, well written, easily read source of information on the ROAD division logistics system. No other similar document has come to the attention of this author which so concisely presents the basic information concerning this subject.

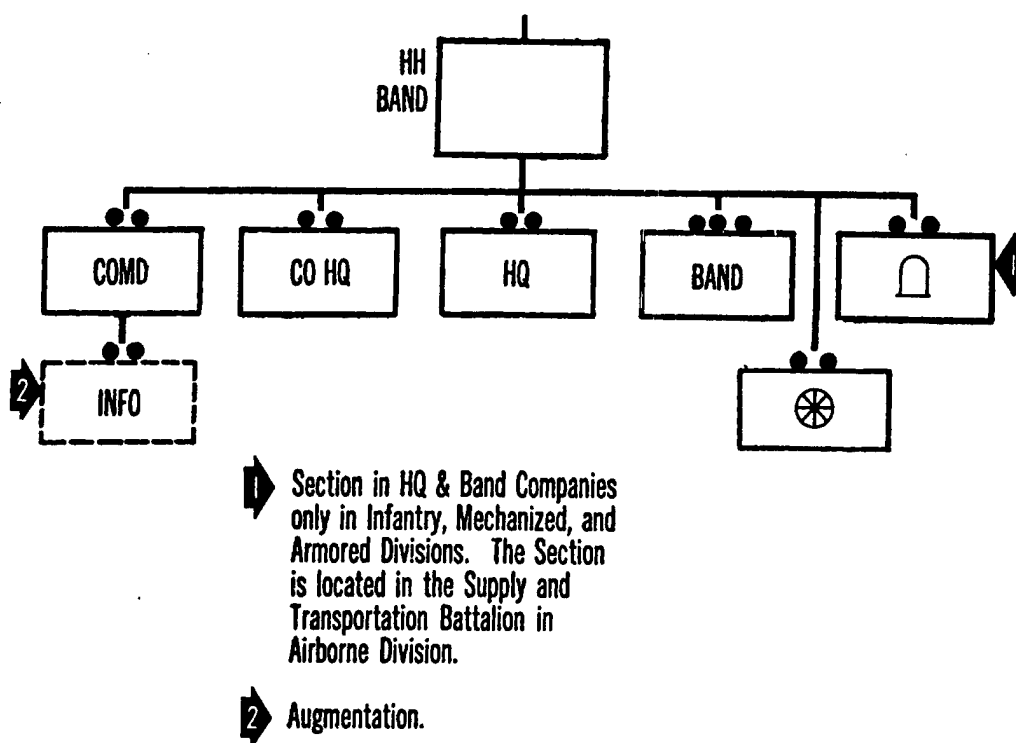
Recommendation 13. That a DA team be organized to tour the CONUS army areas and overseas theaters to stress the importance of the logistic functional areas. Such a team could produce a professionally stimulating lecture and demonstration of perhaps four hours in length. This team would brief army, corps, division, and logistical command staffs on current logistic problems of a world wide nature and present concepts, ideas, and technical advice to improve the quality of combat service support.

APPENDIXES



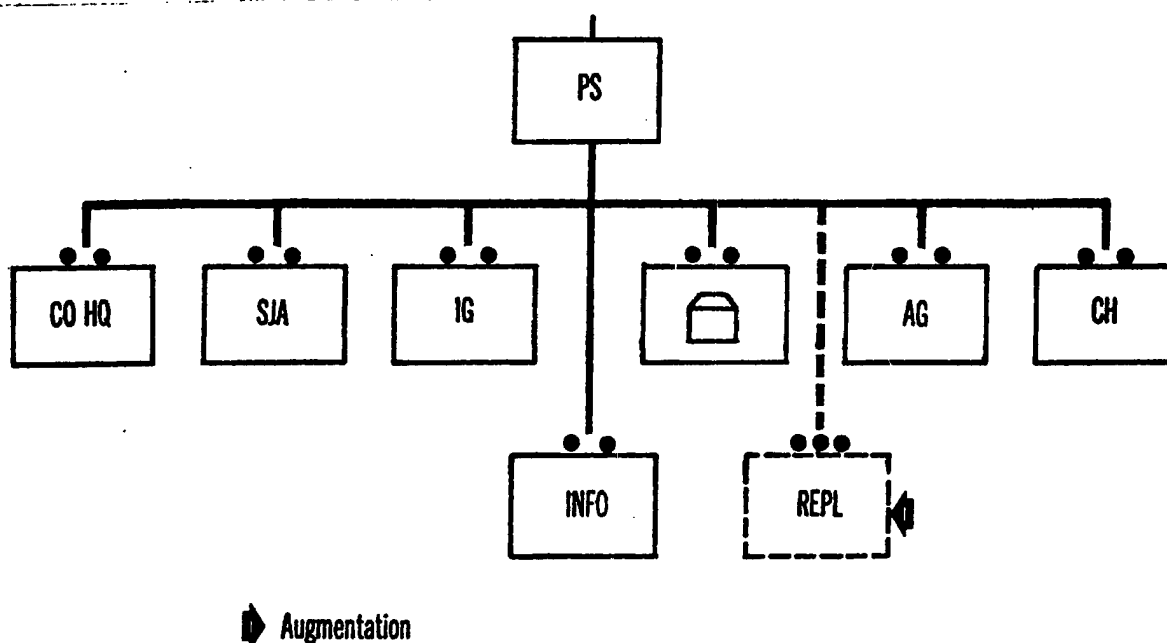
Source: The Division Support Command, FM 54-2, (1965), p. 7.

Fig. 1. - - Typical deployment of division logistic facilities



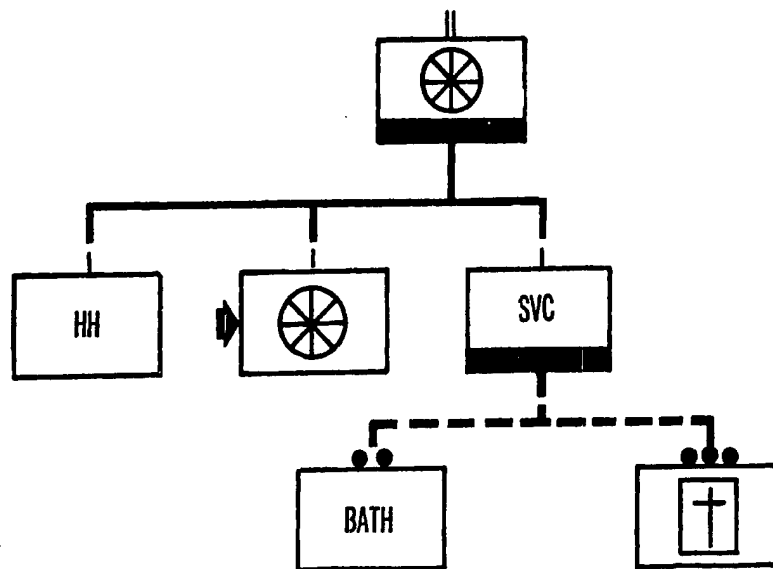
Source: The Division Support Command, FM 54-2, (1965), p. 17.

Fig. 3. -- Headquarters, headquarters company and band, division support command



Source: The Division Support Command, FM 54-2, (1965), p. 18.

Fig. 4. -- Division administration company



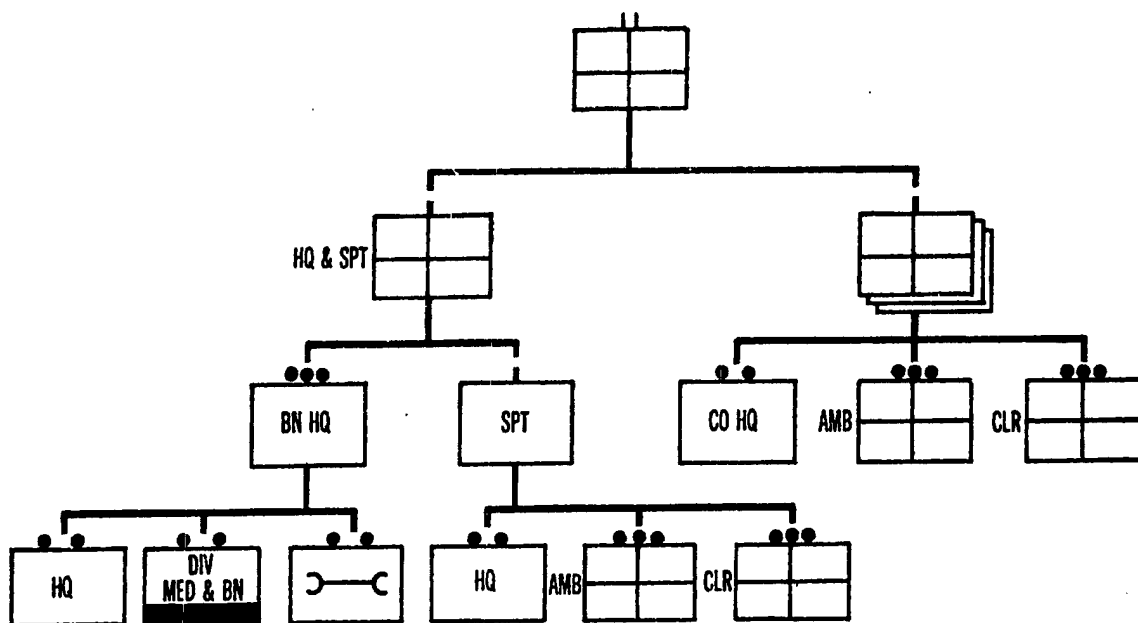
▶ Because the Supplies required by the Armored, Mechanized, Infantry, and Airborne Divisions generally decrease in that order, the Personnel Strength and Trucks of the Transportation Company decrease slightly in the same order. Motor Transportation Company is Augmentation to Airborne Division.

LEGEND

----- Augmentation

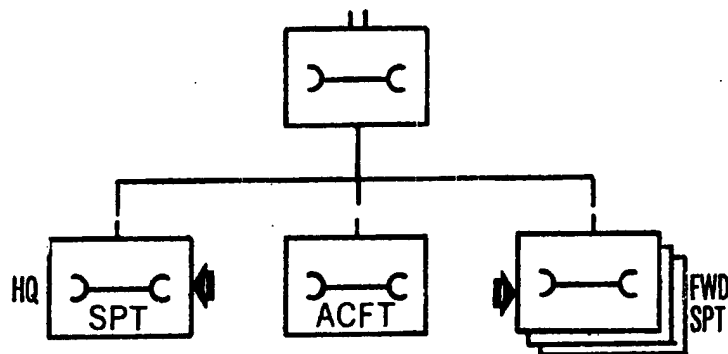
Source: The Division Support Command, FM 54-2, (1965), p. 20.

Fig. 5. - - Division supply and transport battalion



Source: The Division Support Command, FM 54-2, (1965), p. 19.

Fig. 6. -- Division medical battalion



► Because the Maintenance required by the Armored, Mechanized, Infantry, and Airborne Divisions generally decreases in that order, the Personnel Strength of these Units decreases in that order. Forward Support Maintenance Units are Detachment Size in Airborne Divisions.

Source: The Division Support Command, FM 54-2, (1965), p. 21.

Fig. 7. -- Division maintenance battalion

Appendix B
MOS 2624 Logistical Commander

Extract AR 611-101, June, 1960.

- Duties:
1. Directs logistical functions of Supply, Services, Hospitalization and Evacuation, Transportation.
 2. Prepares, plans and coordinates activities with other headquarters.
 3. Establishes policies for logistic support.
 4. Controls labor pool and its allotment.
 5. Administers support activities (Supply and Maintenance).
 6. Directs operation and maintenance of utilities.
 7. Provides for security, guard, fire and police protection.
 8. Furnishes operational supplies, accounting and custodial services.
 9. Directs training, local defense and intelligence activities.

Qualifications:

1. Thorough knowledge of Army logistic policies, problems, procedures and administrative procedures.
2. Thorough knowledge of organization and functions of logistics installations.
3. Thorough knowledge of supply management and operations to include depot and warehouse management techniques.
4. Thorough knowledge of organization capabilities and limits of transportation facilities.
5. Thorough knowledge of maintenance procedures and unit capabilities.
6. Thorough knowledge of hospitalization procedures and requirements.
7. Thorough knowledge of Army organization, procedures, regulations and be competent in logistic operations in close support of combat elements.
8. Thorough knowledge of necessary administrative and executive skills to command, organize and direct activities of major army organizations.

Appendix C

Logistic Functions of G4

1. Materiel and Services

a. Supply

- (1) Det. of supply requirements.
- (2) Procurement of required supplies by requisition on the base of support or by exploitation of local resources.
- (3) Receipt storage and distribution of supplies to supported forces.
- (4) Provision of control means necessary to coordinate the operations of the supply system.
- (5) Maintaining information on the status of supply.

b. Transportation

- (1) Transportation of units, personnel and supplies by pipeline, water, rail, highway and air to include operation of carriers.
- (2) Control of movements to include selection of routes, highway traffic regulation, traffic control, and preparation of march order annexes pertaining to highway regulation and traffic control.

c. Services

- (1) Establishment of priorities for employment of combat service support.
- (2) Designation of times for movement and general location of service troops.
- (3) Selection and allocation of service troops by types and number required to support the command.
- (4) Requirements for and use of local civilian labor for logistic support tasks.
- (5) Maintenance of supplies and equipment.
- (6) Construction, except fortifications and signal communications.
- (7) Maintenance and provision of utilities for facilities and for installations.
- (8) Acquisition, allocation, administration, and disposition of real estate, including billets and shelter.
- (9) Collection and disposition of excess property, salvage and captured material.

2. Miscellaneous

- a. Location of rear boundaries.
- b. Preparation of logistics portion, authentication, and distribution of administrative plans and orders.
- c. Recommending the main supply route.

Appendix D
G4 Section TOE

<u>Title</u>	<u>Rank</u>	<u>MOS</u>	<u>Branch</u>	<u>Number</u>
G4	LTC	04010	NO	1
Ass't. G4	MAJ	04010	NO	2
Ass't. G4	CAPT	04010	NO	1
Chief Supply Sgt.	E9	76N50	NC	1
Materiel Readiness NCO	E9	63B50	NC	1
Ass't. Ch. Supp. Sgt.	E8	76N50	NC	1
Materiel Readiness NCO	E8	63B50	NC	1
Secretary Steno.	E5	71C30		1
Clerk Typist	E4	71B30		2
Lt. Trk. Driver	E3	11B10		<u>1</u>
			Total	12

Appendix E

MOS 4010 Supply Staff Officer (G4, S4)

Extract AR 611-101, June, 1960.

Duties:

1. Advises commander relative to required logistic support for any action.
2. Issues, directs and supervises execution of orders covering logistical matters.
3. Plans and directs activities concerning receipt, issue maintenance of supplies and the location of unit supplies, evacuation and maintenance responsibilities.
4. Plans for maintenance and utilization of roads, docks and supply installations.
5. Responsible for maximum utilization of transportation, planning of movements, traffic regulation and control.
6. Directs activity pertaining to supply economy, funds, property responsibility.
7. Directs activity pertaining to salvage, protection of supply routes, location of rear boundaries.
8. Initiates, coordinates, distributes, authenticates the administrative order.
9. Plans and supervises the logistical training of own section.
10. Maintains liaison with higher and lower headquarters and services.
11. Coordinates with G3 or S3 for details of the tactical plans and with G1 or S1 for details pertaining to supervision by those offices.

Qualifications:

1. Perform duties as outlined.
2. Know Army organization and procedures.
3. Military command and the tactical employment of units.
4. Have had the basic course for regimental or battalion staff or have had equivalent military training or experience.

Appendix F
Corps G4 Section

<u>Designation</u>	<u>Branch</u>	<u>MOS</u>	<u>Grade</u>	<u>Auth.</u>
G4	NO	4010	COL	1
Ass't. G4	NO	4010	LTC	1
			MAJ	1
Ass't. G4	SM	4512	LTC	1
"	OD	4513	LTC	1
"	SM	4415	LTC	1
"	TC	0694	LTC	1
"	SM	4015	LTC	1
"	CM	57314	MAJ	1
"	MP	910C	MAJ	1
"	TC	64823	MAJ	1
Ass't. G4, TOC	NO	2625	MAJ	1
Food Advisor	QM	4114	CAPT	1
			Officers	13
			Enlisted	11
			Total	24

Appendix G
Field Army G4 Section

<u>Designation</u>	<u>Branch</u>	<u>MOS</u>	<u>Grade</u>	<u>Auth.</u>
G4	GO	0002	BG	1
Ass't. G4	SM	2625	COL	1
Ass't. G4, Maint.	SM	2625	COL	1
Ass't. G4, Plans and Programs	SM	2625	COL	1
Ass't. G4, Services	SM	2625	COL	1
Ass't. G4, Supply	SM	2625	COL	1
Transportation Materiel Officer	TC	0694	LTC	1
Ass't. G4	CM	7314	LTC	2
			MAJ	1
Ass't. G4	MP	9100	LTC	1
			MAJ	2
Ass't. G4	SM	2625	LTC	2
			MAJ	1
"	OD	4800	LTC	1
"	SC	4400	LTC	1
"	TC	60692	LTC	1
"	QM	4015	LTC	1
"	OD	4514	MAJ	1
"	OD	4530	MAJ	1
"	SC	4415	MAJ	1
"	QM	4114	MAJ	1
"	SM	2625	MAJ	3
			CAPT	3
"	QM	4419	CAPT	1
"	TC	0609	MAJ	1
"	TC	0694	MAJ	1
"	TC	4823	MAJ	1
Missile-Nuclear Weapons	OD	4513	MAJ	1
		Officers		33
		Enlisted		38
		Total		71

Appendix H

Logistics Coverage in the Armor/Infantry Career Course

2-17-C22 (36 weeks)

Total Hours	1,602
Academic Hours	1,222
Non-Academic Hours	380

Overall Course Coverage

Combined Arms	570 Hours
Staff Subjects	149
General Subjects	123
Communications Electronics	50
Materiel Readiness & Maint.	89
Weapons	114
Misc.	<div style="border-top: 1px solid black; display: inline-block; width: 50px;"></div> 127
	1,222

Materiel Readiness and Maintenance

Ground Vehicles	34
Maint. Management	29
Materiel Readiness	12
Unit Readiness	3
Preventive Maint.	<div style="border-top: 1px solid black; display: inline-block; width: 50px;"></div> 11
	89

Appendix I

Logistics Coverage in the Artillery Career Course

2-6-C22 (32 weeks)

Total Hours	1,056
Academic Hours	838
Non-Academic Hours	218

Overall Course Coverage

Maintenance Management	31
Communications Electronics	24
Guided Missiles	14
Gunnery	205
Tactics/Combined Arms	508
Target Acquisition	22
Demonstrations	9
Guest Speakers	18
Misc.	<u>7</u>
	838

Maintenance Management

Maint. System	1
Current Surface Mobility Equipment	2
Organizational Maint. Personnel	1
Preventive Maintenance	4
Driver Selection and Training	1
Materiel Readiness	3
Maintenance and Supply Publications	2
Repair Parts Supply	2
Vehicle Operators Duties	1
The Army Equipment and Records System	6
Maintenance Management Exercise	4
Exam and Critique	3
Inspection	<u>1</u>
	31 Hours

Appendix J

Logistics Coverage in the Engineer Career Course

4-5-C22 (29 weeks)

Total Hours	1,276
Academic Hours	918
Non-Academic Hours	358

Overall Course Coverage

General Subjects	40
Command and Staff	52
Combat Operations	228
Nuclear Warfare	59
Military Engineering	255
Civil Works	72
Mapping, Terrain Intelligence	42
Equipment Utilization and Maint.	<u>76</u>

824 plus a 90-hour
elective*

*Segment B is a 90-hour elective in Materiel Management.

Equipment Utilization and Maintenance Coverage

Introduction	1
Army Maintenance System	2
Maint. Publications	1
Army Equipment Records Procedures	2
Maintenance Inspections	1
Unit Readiness	1
Equipment Service Criteria	2
Materiel Readiness	8
Repair Parts Supply	2
Examination	<u>1</u>
	21
Utilization of Engineer Equipment	<u>55</u>
Total	76

Appendix K

Logistics Coverage in the Signal Career Course

4-11-C22 (29 weeks)

Total Hours	1,308
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Academic Hours	950
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Non-Academic Hours	358
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Overall Course Coverage

Tactical Signal Communications	161
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Communications Center Operations	46
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Organization and Tactics	157
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Technical Subjects (Radio and Telephone Comm.)	331
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Non-Phased Subjects	213
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Incl 41 NBC

45 ADP

73 General Mil. Subjects

47 Logistics

7 Electronic Warfare

Examinations	32
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Special Instructor Program	10
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950

Logistics Coverage

CONUS Logistics	1
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Supply	2
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Management Processes	2
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Financial Management	2
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Supply Management	1
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Preventive Maint.	3
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TAERS	2
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DS/GS Maint.	1
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Materiel Readiness	2
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Organizational Repair Parts Management	2
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Army Stock Control System	3
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Technical Assistance Program	1
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Maintenance Publications	2
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Maintenance Inspections	3
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Command Maintenance Management	1
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G4 Responsibility	1
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DISCOM	2
Division Maintenance Elements	1
Division Maintenance Operations	1
Division Maintenance Support	1
S&T Battalion	2
Transport Operations	3
FASCOM	1
Medical Service	6
Unit Readiness	<u>1</u>
	47 Hours

Appendix L

Logistics Coverage in the Quartermaster Career Course

8-10-C22 (32 weeks)

Total Hours	1,056
Academic Hours	751
Non-Academic Hours	305

Overall Course Coverage

<u>Supply and Services</u>	269
CONUS Supply	75
Financial Management	28
Petroleum Equipment	8
Installation Procedures	20
Procurement	21
Field Storage Procedures	10
Automated Supply Systems	69
Maintenance Management	38
<u>Command, Staff, Division, and Nuclear Weapons</u>	156
Division	23
Command and Staff	34
Division Combat Support	17
Division CSS	16
Nuclear Weapons	31
Division Tactics	35
<u>Combat Service Support and Combat Support-TOPNS</u>	132
Logistical Commands	33
Supply Systems	29
Logistical Services	13
Movements and Joint Logistics	57
<u>Maintenance Management</u>	38
QM Equipment Maintenance	14
TAERS	3
Materiel Readiness & ESC	2
Inspection of Equipment	3
Maintenance Management	3
Vehicle Recovery	2
Equipment Repair Limits	1
Maintenance Developments	1

Maintenance Support	2
Maintenance Problems	2
Readiness Reporting	2
Examination	2
Policies for New Equipment	1

Appendix M

Content of SY 67-68 Regular Course, Command and General Staff College

Extracts of the course include 228 subjects totaling 1389 academic hours. (Not included in the following figures are examinations).

The following is a consolidation of planned content furnished by academic agencies.

1. Functional Coverage.

	<u>Tactical</u>		<u>Non-tactical</u>		<u>TOTAL</u>	
	<u>Hours</u>	<u>Percent</u>	<u>Hours</u>	<u>Percent</u>	<u>Hours</u>	<u>Percent</u>
Operations	464	33.4	86.2	6.2	550.2	39.6
Intelligence	125.4	9.0	13.5	1.0	138.9	10.0
Combat Service Support	208	15.0	67.9	4.5	270.9	19.5
Logistics-General	(43)	(3.1)	(40.5)	(2.9)	(83.5)	(6.0)
Personnel Services	(21.1)	(1.5)	(2.5)	(0.2)	(23.6)	(1.7)
Plans & Orders	(3.4)	(0.2)			(3.4)	(0.2)
Civil Affairs	(12.2)	(0.9)			(12.2)	(0.9)
Supply	(53.1)	(3.8)	(1.2)	(0.1)	(54.3)	(3.9)
Maintenance	(16.3)	(1.2)	(0.4)		(16.7)	(1.2)
Medical	(13.9)	(1.1)	(0.4)		(14.3)	(1.1)
Transportation	(26)	(1.9)	(0.8)	(0.1)	(26.8)	(2.0)
Admin. Services	(3.3)	(0.2)	(1.2)	(0.1)	(4.5)	(6.3)
Construction'	(4.8)	(0.3)			(4.8)	(0.3)
Civilian Personnel			(2.0)	(0.1)	(2.0)	(0.1)
Procurement	(0.2)				(0.2)	
Rear Area Protection	(0.4)				(0.4)	
Labor	(1.5)	(0.1)			(1.5)	(0.1)
Base Development	(7.2)	(0.5)			(7.2)	(0.5)
Military Police	(0.4)				(0.4)	
Staging	(0.5)	(0.1)			(0.5)	
Organization			(13.6)	(1.0)	(13.6)	(1.0)
Command Information	(0.7)	(0.1)	(0.3)		(1.0)	(0.1)
Other			429	30.9	429	30.9

Functional Coverage (Cont)

	<u>Tactical</u>		<u>Non-tactical</u>		<u>TOTAL</u>	
	<u>Hours</u>	<u>Percent</u>	<u>Hours</u>	<u>Percent</u>	<u>Hours</u>	<u>Percent</u>
Orientation			(4)	(0.3)	(4)	(0.3)
Management			(45)	(3.2)	(45)	(3.2)
Legal			(9)	(0.6)	(9)	(0.6)
R&D			(8)	(0.6)	(8)	(0.6)
N/A			(163)	(11.7)	(163)	(11.7)
Student Research						
	797.4	57.4	591.6	42.6	1389	100

2. Coverage of Selected Subjects:

	<u>Hours</u>
Employment of Nuclear Weapons:	60.2
Employment of CB(R) Weapons:	20.3
Application of ADPS:	18.8
OR/SA	25.7
Resource Utilization	53.7
Stability Operations	91.3
Maintenance Management	14.4
Contingency Planning	54.7
Base Development & Buildup Planning	43.9

3. This course contains 192 hours of Counterinsurgency Training.

Appendix N

Suggested outline of a field army logistics course.

Duration: 4 weeks

Location: Fort Lee, Virginia

Subjects

1. Commands, organizations, and operations of TOPN'S
2. Mission, functions, and command relationships of COMMZ elements
3. Missions, functions, and command relationships of field army logistical elements
4. Specialized training and practical work
5. Equipment orientations
6. Use of Direct Support supply and maintenance facilities
7. Logistic policies.

Scope

Field Army, non-divisional units, ROAD division, corps. Familiarization with COMMZ, TALOG, BALOG, ADLOG, intersec-tional services, area commands. FASCOM, army wide services, support commands, GS Group, DS Group, DISCOM, ROAD and COSTAR. Supply procedures to include MILSTRIP, maintenance proce-dures, TAERS, log book mainten-ance, materiel readiness report-ing, ammunition fundamentals, labor, transportation aspects. Statistical analysis of the materiel readiness reports. New equipment orientations to include practical experience in the following: vehicles, aircraft, weapons, communications equipment, ammunition. ESC and PM evaluations. Use of aircraft for resupply. Logistic operations in support of ROAD users. Problem areas, and technical advice and assis-tance available from DS. Ser-vices available. Float items. Evacuation channels. Current doctrine as expressed in DA regulations and policy statements.

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